

GenCore version 5.1.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:07 ; Search time 74.25 Seconds
(without alignments)
929.057 Million cell updates/sec

Title: US-10-668-178-3
Perfect score: 814
Sequence: 1 VRSSRTSDMEVAHVANP.....RPDYLDFAESGVFGIALL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: Geneseq1980s.*
2: Geneseq1990s.*
3: Geneseq2000s.*
4: Geneseq2001s.*
5: Geneseq2002s.*
6: Geneseq2003as.*
7: Geneseq2003bs.*
8: Geneseq2004s.*
9: Geneseq2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	814	100.0	157	8	ADH10160 Human tum
2	807	99.1	157	9	AEB45433 TNF-R1 sp
3	806	99.0	157	9	AEB45432 TNF-R1 sp
4	805	98.9	157	9	AEB45434 TNF-R1 sp
5	803	98.6	157	9	AEB45430 TNF-R1 sp
6	800	98.3	157	9	AEB45453 TNF-R2 sp
7	799	98.2	157	9	AEB45431 TNF-R1 sp
8	795	97.7	157	9	AEB45454 TNF-R2 sp
9	793	97.4	157	9	AEB45459 TNF-R2 sp
10	792	97.3	157	9	AEB45438 TNF-R1 sp
11	792	97.3	157	9	AEB45436 TNF-R1 sp
12	792	97.3	157	9	AEB45461 TNF-R2 sp
13	791	97.2	157	9	AEB45460 TNF-R2 sp
14	791	97.2	157	9	AEB45464 TNF-R2 sp
15	790	97.1	157	9	AEB45472 TNF-R2 sp
16	790	97.1	157	9	AEB45471 TNF-R2 sp
17	790	97.1	157	9	AEB45455 TNF-R2 sp
18	790	97.1	157	9	AEB45466 TNF-R2 sp
19	790	97.1	157	9	AEB45474 TNF-R2 sp
20	790	97.1	157	9	AEB45457 TNF-R2 sp
21	790	97.1	157	9	AEB45475 TNF-R2 sp
22	789	96.9	157	9	AEB45458 TNF-R2 sp
23	789	96.9	157	9	AEB45473 TNF-R2 sp
24	789	96.9	157	9	AEB45467 TNF-R2 sp

25	789	96.9	157	9	AEB45468	Aeb45468 TNF-R2 sp
26	788	96.8	157	9	AEB45437	Aeb45437 TNF-R1 sp
27	788	96.8	157	9	AEB45462	Aeb45462 TNF-R2 sp
28	788	96.8	157	9	AEB45470	Aeb45470 TNF-R2 sp
29	787	96.7	157	9	AEB45456	Aeb45456 TNF-R2 sp
30	787	96.7	157	9	AEB45459	Aeb45459 TNF-R2 sp
31	787	96.7	157	9	AEB45465	Aeb45465 TNF-R2 sp
32	787	96.7	157	9	AEB45463	Aeb45463 TNF-R2 sp
33	785	96.4	157	9	AEB45429	Aeb45429 TNF-R1 sp
34	784	96.3	157	9	AEB45428	Aeb45428 TNF-R1 sp
35	784	96.3	157	9	AEB45425	Aeb45425 TNF-R1 sp
36	783	96.2	157	9	AEB45421	Aeb45421 Human TNF
37	782	96.1	157	9	AEB45427	Aeb45427 TNF-R1 sp
38	782	96.1	157	9	AEB45423	Aeb45423 Human TNF
39	782	96.1	157	9	AEB45435	Aeb45435 TNF-R1 sp
40	780	95.8	157	2	AAP62465	Tumour ne
41	779	95.7	157	1	AAP60524	Sequence
42	779	95.7	157	1	AAP70095	Tumour ne
43	779	95.7	157	1	AAP70144	Amino aci
44	779	95.7	157	2	AAR14270	Human TNF
45	779	95.7	157	2	AAR14112	Neutroph

ALIGNMENTS

RESULT 1
ADH10160
ID ADH10160 standard; protein; 157 AA.
XX
AC ADH10160;
XX
DT 11-MAR-2004 (first entry)
XX
DE Human tumour necrosis factor variant protein.
XX
KW TNF; tumour necrosis factor; polyethylene glycol; cytostatic; cancer;
KW human; variant.
XX
OS Homo sapiens.
XX
PN EP1354893-A2.
XX
PD 22-OCT-2003.
XX
PF 30-JAN-2003; 2003EP-00250587.
XX
PR 25-MAR-2002; 2002JP-00083509.
PR 26-JUN-2002; 2002JP-00185387.
XX
XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
PI Mayumi T, Tsutsumi Y, Nakagawa S, Ikegami H;
XX
DR WPI: 2004-063952/07.
DR N-PSDB; ADH10169.
XX
PT A physiologically active complex which comprises a protein part with
PT tumor necrosis factor activity and a high molecular part has higher
PT stability and retention in living bodies and is useful to treat disease,
PT particularly cancer.
XX
PS Example 1; SEQ ID NO 3; 18pp; English.
XX
CC The present sequence represents a physiologically active complex which
CC comprises a proteinaceous part with tumour necrosis factor (TNF) activity
CC and a high molecular part bound artificially to the N-terminus of the
CC proteinaceous part. The proteinaceous part comprises the sequence
CC selected from ADH10159 and the molecular part has a molecular weight of
CC 500-5000 Da and is a homopolymer of polyethylene glycol or a copolymer of

CC ethylene glycol and its derivatives. The invention is used to treat
 CC susceptible disease, particularly cancer. The complex has a higher
 CC stability and longer retention time in living bodies than intact tumour
 CC necrosis factor. The present sequence represents a human TNF variant
 CC protein.
 XX
 SQ Sequence 157 AA;

Query Match 100.0%; Score 814; DB 8; Length 157;
 Best Local Similarity 100.0%; Pred. No. 9.6e-76;
 Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 QY 61 QVLFSGQGCPSTHLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAENPWTEPIYL 120
 DB 61 QVLFSGQGCPSTHLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAENPWTEPIYL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157

RESULT 2
 ID AEB45433 standard; protein; 157 AA.
 AC AEB45433;
 XX
 DT 22-SEP-2005 (first entry)
 DE
 DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:17.
 KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
 KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN WO2005066206-A1.
 XX
 XX 21-JUL-2005.
 XX
 XX 05-JAN-2005; 2005WO-JP0000032.
 XX
 XX 06-JAN-2004; 2004JP-00001427.
 XX
 XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 PA (MAYU/) MAYUMI T.
 PA (TSUT/) TSUTSUMI Y.
 PA (NAKA/) NAKAGAWA S.
 XX
 PI Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 XX
 DR WPI; 2005-506850/51.
 DR N-PSDB; AEB45447.
 XX
 PT Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.
 XX
 PS Claim 4; SEQ ID NO 17; 34pp; Japanese.
 XX

CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC a TNF2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.
 XX
 SQ Sequence 157 AA;

Query Match 99.1%; Score 807; DB 9; Length 157;
 Best Local Similarity 98.7%; Pred. No. 5.1e-75;
 Matches 155; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 QY 61 QVLFSGQGCPSTHLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAENPWTEPIYL 120
 DB 61 QVLFSGQGCPSTHLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAENPWTEPIYL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFADGQVYFGIIAL 157

RESULT 3
 ID AEB45432 standard; protein; 157 AA.
 AC AEB45432;
 XX
 DT 22-SEP-2005 (first entry)
 DE
 DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:16.
 XX
 KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
 KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN WO2005066206-A1.
 XX
 XX 21-JUL-2005.
 XX
 XX 05-JAN-2005; 2005WO-JP0000032.
 XX
 XX 06-JAN-2004; 2004JP-00001427.
 XX

PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
PI
XX
XX
XX WPI; 2005-506850/51.
DR N-PSDB; AEB45446.
XX
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX
XX
PS Claim 4; SEQ ID NO 16; 34pp; Japanese.
XX
XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
XX particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 157 AA;

Query Match 99.0%; Score 806; DB 9; Length 157;
Best Local Similarity 98.7%; Pred. No. 6.4e-75;
Matches 155; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVAVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDMPVAHVAVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGCPSHTVLLTHTTSIRIAVSQYTPVNLISAIRSCQRETPGAEANPWYEPYIL 120
Db 61 QVLFSGGCGCPSHTVLLTHTTSIRIAVSQYTPVNLISAIRSCQRETPGAEANPWYEPYIL 120

QY 121 GGVOLEPGDRLSAEINRPDYLDPFASGQVYFGIAL 157
Db 121 GGVOLEPGDRLSAEINRPDYLDPFASGQVYFGIAL 157

RESULT 4
AEB45434
ID AEB45434 standard; protein; 157 AA.
XX
AC AEB45434;
XX
DT 22-SEP-2005 (first entry)
XX
XX TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:18.
DE
XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimers disease;

KW antinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW muten.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX WO2005066206-A1.
XX
XX 21-JUL-2005.
XX
XX 05-JAN-2005; 2005WO-JP000032.
XX
XX 06-JAN-2004; 2004JP-00001427.
XX
XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
PI
XX
XX WPI; 2005-506850/51.
DR N-PSDB; AEB45448.
XX
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX
XX
XX Claim 4; SEQ ID NO 18; 34pp; Japanese.
XX
XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 157 AA;

Query Match 98.9%; Score 805; DB 9; Length 157;
Best Local Similarity 98.7%; Pred. No. 8.2e-75;
Matches 155; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVAVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDMPVAHVAVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGCPSHTVLLTHTTSIRIAVSQYTPVNLISAIRSCQRETPGAEANPWYEPYIL 120
Db 61 QVLFSGGCGCPSHTVLLTHTTSIRIAVSQYTPVNLISAIRSCQRETPGAEANPWYEPYIL 120

QY 121 GGVOLEPGDRLSAEINRPDYLDPFASGQVYFGIAL 157
Db 121 GGVOLEPGDRLSAEINRPDYLDPFASGQVYFGIAL 157

Db 121 GGVFQLEPGDRLSAEINRPDYLDPFANDGQVYFGIIAL 157

RESULT 5
ID AEB45430
AC AEB45430;
XX
XX
DT 22-SEP-2005 (first entry)
XX
XX
DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:14.
KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmoidium infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipeptidic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutein.
XX
XX
OS Homo sapiens.
OS Synthetic.
XX
XX
FN WO2005066206-A1.
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PD 21-JUL-2005.
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PF 05-JAN-2005; 2005WO-JP000032.
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PR 06-JAN-2004; 2004JP-00001427.
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XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
XX
PI Mayumi T, Teutsuni Y, Nakagawa S, Ohta T;
XX
XX
WPI; 2005-506850/51.
DR N-PSDB; AEB45444.
XX
XX
PT Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX
XX
PS Claim 4; SEQ ID NO 14; 34pp; Japanese.
XX
XX
CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

XX SQ Sequence 157 AA;
Query Match 98.6%; Score 803; DB 9; Length 157;
Best Local Similarity 98.1%; Pred. No. 1.3e-74;
Matches 154; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
QY 1 VRSSRTSPDMPVAHVANPOAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
DB 1 VRSSRTSPDMPVAHVANPOAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
QY 61 QVLFSGQGPCSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
DB 61 QVLFSGQGPCSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
QY 121 GGVFQLEPGDRLSABINRPDYLDFAESQGVYFGIIAL 157
DB 121 GGVFQLEPGDRLSABINRPDYLDFAESQGVYFGIIAL 157
RESULT 6
ID AEB45453
AC AEB45453;
XX
XX
DT 22-SEP-2005 (first entry)
XX
XX
DE TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:37.
KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmoidium infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipeptidic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutein.
XX
XX
OS Homo sapiens.
OS Synthetic.
XX
XX
FN WO2005066206-A1.
XX
XX
PD 21-JUL-2005.
XX
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PF 05-JAN-2005; 2005WO-JP000032.
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PR 06-JAN-2004; 2004JP-00001427.
XX
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
XX
PI Mayumi T, Teutsuni Y, Nakagawa S, Ohta T;
XX
XX
WPI; 2005-506850/51.
DR N-PSDB; AEB45476.
XX
XX
PT Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX
XX
PS Claim 5; SEQ ID NO 37; 34pp; Japanese.
XX
XX
CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.
 CC
 XX Sequence 157 AA;

Query Match 98.3%; Score 800; DB 9; Length 157;
 Best Local Similarity 98.1%; Pred. No. 2.7e-74;
 Matches 155; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVAVNPQAEGLQWLNRRNALLANGVELRDQLVPSGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVAVNPQAEGLQWLNRRNALLANGVELRDQLVPSGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHTRISIAVSQTPVNLISAIRSPQRETPGAEANPWYPIYL 120
 DB 61 QVLFSGGCGPSTHVLTHTRISIAVSQTPVNLISAIRSPQRETPGAEANPWYPIYL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFABSGQVYFGIAL 157
 DB 121 GGVFQLEPGDRLSAEINRPDYLDFABSGQVYFGIAL 157

RESULT 7
 AEB45431
 ID AEB45431 standard; protein; 157 AA.

XX AEB45431;
 XX
 XX 22-SEP-2005 (first entry)
 XX
 XX TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:15.
 XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmadum infection; meningitis; hepatitis; psoriasis; cachexia;
 KW antiinflammatory; cytostatic; antineoplastic; antitumor; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutin.

XX Homo sapiens.
 OS Synthetic.
 XX
 XX WO2005066206-A1.
 XX
 XX 21-JUL-2005.
 XX
 XX 05-JAN-2005; 2005WO-JP000032.
 XX
 XX 06-JAN-2004; 2004JP-00001427.
 XX
 XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 PA (MAYU)/ MAYUMI T.
 PA (TSUTU)/ TSUTSUMI Y.
 PA (NAKA)/ NAKAGAWA S.
 XX

PI Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 XX WPI; 2005-506850/51.
 DR N-PSDB; AEB45445.
 XX Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.
 XX
 XX Claim 4; SEQ ID NO 15; 34pp; Japanese.
 PS
 XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.
 XX
 XX Sequence 157 AA;

Query Match 98.2%; Score 799; DB 9; Length 157;
 Best Local Similarity 98.1%; Pred. No. 3.4e-74;
 Matches 154; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVAVNPQAEGLQWLNRRNALLANGVELRDQLVPSGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVAVNPQAEGLQWLNRRNALLANGVELRDQLVPSGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHTRISIAVSQTPVNLISAIRSPQRETPGAEANPWYPIYL 120
 DB 61 QVLFSGGCGPSTHVLTHTRISIAVSQTPVNLISAIRSPQRETPGAEANPWYPIYL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFABSGQVYFGIAL 157
 DB 121 GGVFQLEPGDRLSAEINRPDYLDFABSGQVYFGIAL 157

RESULT 8
 AEB45454
 ID AEB45454 standard; protein; 157 AA.

XX AEB45454;
 XX
 XX 22-SEP-2005 (first entry)
 XX
 XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:38.

XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmadum infection; meningitis; hepatitis; psoriasis; cachexia;
 KW antiinflammatory; cytostatic; antineoplastic; antitumor; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutin.

```
XX OS Homo sapiens.
XX AC Synthetic.
XX PN WO2005066206-A1.
XX PD 21-JUL-2005.
XX PF 05-JAN-2005; 2005WO-JP000032.
XX PR 06-JAN-2004; 2004JP-00001427.
XX PA (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX PA (MAYU/) MAYUMI T.
XX PA (TSUT/) TSUTSUMI Y.
XX PA (NAKA/) NAKAGAWA S.
XX PI Mayumi T, Teutsumi Y, Nakagawa S, Ohta T;
XX WPI; 2005-506850/51.
XX DR N-PSDB; AEB45477.
XX PT Novel tumor necrosis factor TNF mutant protein, useful for treating
XX and/or preventing diseases such as inflammation, and other diseases
XX caused by overexpression of TNF, such as autoimmune diseases, tumor,
XX rheumatoid arthritis, allergy.
XX PS Claim 5; SEQ ID NO 38; 34pp; Japanese.
XX CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
XX particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
XX TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
XX a TNF mutant protein comprising an amino acid sequence derived from the
XX human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
XX one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
XX N-terminus, and amino acid residues at positions 84-89 by other amino
XX acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
XX mutant protein; and (2) a TNF formulation comprising a TNF mutant
XX protein. The TNF mutant proteins are useful for treating and/or
XX preventing diseases such as inflammation, and other diseases caused by
XX overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
XX cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
XX Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
XX transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
XX respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
XX lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
XX etc. The TNF mutant proteins are highly stable in vivo. This sequence
XX represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
XX The sequence data for this patent did not form part of the printed
XX specification, but was obtained in electronic format directly from WIPO
XX at ftp.wipo.int/pub/published_pct_sequences.
XX SQ Sequence 157 AA;

Query Match          97.7%; Score 795; DB 9; Length 157;
Best Local Similarity 98.1%; Pred. No. 8.8e-74;
Matches 154; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
   |||||
Db 1 VRSSRTPSDMPVAHVANPQAEQQLQWNGYANALLANGVELRDNLQVPSSEGLYLIYS 60
   |||||

QY 61 QVLFSGQGCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPGEAANPWTEPIYL 120
   |||||
Db 61 QVLFSGQGCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPGEAANPWTEPIYL 120
   |||||

QY 121 GGVFQLEPGDRLSAENRPDYLDFAESGGVYFGIAL 157
   |||||
Db 121 GGVFQLEPGDRLSAENRPDYLDFAESGGVYFGIAL 157
   |||||

RESULT 9
AEB45469
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```
ID AEB45469 standard; protein; 157 AA.
XX AC AEB45469;
XX DT 22-SEP-2005 (first entry)
XX DE TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:53.
XX KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
XX autoimmune disease; tumor; transplant rejection; cardiovascular disease;
XX acquired immune deficiency syndrome; severe acute respiratory syndrome;
XX plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
XX antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
XX antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
XX vasotrophic; cerebroprotective; dermatological; immunomodulator;
XX antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
XX mutein.
XX OS Homo sapiens.
XX OS Synthetic.
XX PN WO2005066206-A1.
XX XX 21-JUL-2005.
XX XX 05-JAN-2005; 2005WO-JP000032.
XX PR 06-JAN-2004; 2004JP-00001427.
XX PA (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX PA (MAYU/) MAYUMI T.
XX PA (TSUT/) TSUTSUMI Y.
XX PA (NAKA/) NAKAGAWA S.
XX PI Mayumi T, Teutsumi Y, Nakagawa S, Ohta T;
XX WPI; 2005-506850/51.
XX DR N-PSDB; AEB45492.
XX PT Novel tumor necrosis factor TNF mutant protein, useful for treating
XX and/or preventing diseases such as inflammation, and other diseases
XX caused by overexpression of TNF, such as autoimmune diseases, tumor,
XX rheumatoid arthritis, allergy.
XX PS Claim 5; SEQ ID NO 53; 34pp; Japanese.
XX CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
XX particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
XX TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
XX a TNF mutant protein comprising an amino acid sequence derived from the
XX human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
XX one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
XX N-terminus, and amino acid residues at positions 84-89 by other amino
XX acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
XX mutant protein; and (2) a TNF formulation comprising a TNF mutant
XX protein. The TNF mutant proteins are useful for treating and/or
XX preventing diseases such as inflammation, and other diseases caused by
XX overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
XX cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
XX Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
XX transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
XX respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
XX lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
XX etc. The TNF mutant proteins are highly stable in vivo. This sequence
XX represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
XX The sequence data for this patent did not form part of the printed
XX specification, but was obtained in electronic format directly from WIPO
XX at ftp.wipo.int/pub/published_pct_sequences.
XX SQ Sequence 157 AA;

Query Match          97.4%; Score 793; DB 9; Length 157;
Best Local Similarity 97.5%; Pred. No. 1.4e-73;
```

Matches 153; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

```
QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
    |||||
DB 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
    |||||
QY 61 QVLFSGQCGPSTHVLTHITISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYIL 120
    |||||
DB 61 QVLFSGQCGPSTHVLTHITISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYIL 120
    |||||
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
    |||||
DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
    |||||
```

RESULT 10

AEBA45438
ID AEB45438 standard; protein; 157 AA.

XX AC AEB45438;

XX DT 22-SEP-2005 (first entry)

XX TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:22.

XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimers disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutain.

XX Homo sapiens.

OS Synthetic.

XX WO2005066206-A1.

XX 21-JUL-2005.

XX 05-JAN-2005; 2005WO-JP000032.

XX 06-JAN-2004; 2004JP-00001427.

XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.

XX (MAYU/) MAYUMI T.

XX (TSUT/) TSUTSUMI Y.

XX (NAKA/) NAKAGAWA S.

XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;

XX WPI; 2005-506850/51.

XX N-PSDB; AEB45452.

XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.

XX Claim 4; SEQ ID NO 22; 34pp; Japanese.

XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or

CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

XX Sequence 157 AA;

Query Match 97.3%; Score 792; DB 9; Length 157;

Best Local Similarity 97.5%; Pred. No. 1.8e-73;

Matches 153; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

DB 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGQCGPSTHVLTHITISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYIL 120

DB 61 QVLFSGQCGPSTHVLTHITISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYIL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 11

AEBA45436

ID AEB45436 standard; protein; 157 AA.

XX AC AEB45436;

XX DT 22-SEP-2005 (first entry)

XX TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:20.

XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimers disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutain.

XX Homo sapiens.

OS Synthetic.

XX WO2005066206-A1.

XX 21-JUL-2005.

XX 05-JAN-2005; 2005WO-JP000032.

XX 06-JAN-2004; 2004JP-00001427.

XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.

XX (MAYU/) MAYUMI T.

XX (TSUT/) TSUTSUMI Y.

XX (NAKA/) NAKAGAWA S.

XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;

XX WPI; 2005-506850/51.

XX N-PSDB; AEB45450.

XX

PT Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.

XX Claim 4; SEQ ID NO 20; 34pp; Japanese.

XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, cachexia,
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

XX Sequence 157 AA;

Query Match 97.3%; Score 792; DB 9; Length 157;
Best Local Similarity 97.5%; Pred. No. 1.8e-73;
Matches 153; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQCGPSTHVLTLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120
Db 61 QVLFSGQCGPSTHVLTLTHTISRIAPGYSHPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 12

AEB45461 ID AEB45461 standard; protein; 157 AA.

XX AEB45461;

XX 22-SEP-2005 (first entry)

XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:45.

XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antirheumatic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunomodulatory;
KW vasotropic; cerebroprotective; dermatological; immunomodulatory;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW muten.

XX Homo sapiens.

OS Synthetic.

XX WO2005066206-A1.

XX

PD 21-JUL-2005.

XX 05-JAN-2005; 2005WO-JP000032.

XX 06-JAN-2004; 2004JP-00001427.

XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.

XX Mayumi T, Teutsu Y, Nakagawa S, Ohta T;

XX WPI; 2005-506850/51.
DR N-PSDB; AEB45484.

XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.

XX Claim 5; SEQ ID NO 45; 34pp; Japanese.

XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma,
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

XX Sequence 157 AA;

Query Match 97.3%; Score 792; DB 9; Length 157;
Best Local Similarity 96.8%; Pred. No. 1.8e-73;
Matches 152; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Db 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGQCGPSTHVLTLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120

Db 61 QVLFSGQCGPSTHVLTLTHTISRIASAYSPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157

Db 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 13

AEB45460

ID AEB45460 standard; protein; 157 AA.

XX AEB45460;

XX 22-SEP-2005 (first entry)

XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:44.
 DE
 XX
 KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmadum infection; meningitis; hepatitis; Alzheimers disease;
 KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutein.
 XX
 XX Homo sapiens.
 OS Synthetic.
 XX
 XX AEB45464;
 XX
 XX WO2005066206-A1.
 XX
 XX 21-JUL-2005.
 XX
 XX 05-JAN-2005; 2005WO-JP000032.
 XX
 XX 06-JAN-2004; 2004JP-00001427.
 XX
 XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 XX (MAYU/) MAYUMI T.
 XX (TSUT/) TSUTSUMI Y.
 XX (NAKA/) NAKAGAWA S.
 XX
 XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 XX
 XX WPI; 2005-506850/51.
 XX N-PSDB; AEB45483.
 XX
 XX Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.
 XX
 XX Claim 5; SEQ ID NO 44; 34pp; Japanese.
 XX
 XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
 XX particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pt_sequences.
 XX
 XX Sequence 157 AA;
 SQ
 Query Match 97.2%; Score 791; DB 9; Length 157;
 Best Local Similarity 96.8%; Pred. No. 2.1e-73;
 Matches 152; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDMPVAHVYVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDMPVAHVYVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSHVLTLTHTISRIAVSYQTPVNLLSAIRSPCQRETPGEAANPWYEPYIL 120
 DB 61 QVLFSGQGCPSHVLTLTHTISRIAVSYQTPVNLLSAIRSPCQRETPGEAANPWYEPYIL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 RESULT 14
 AEB45464
 ID AEB45464 standard; protein; 157 AA.
 XX
 XX AEB45464;
 XX
 XX 22-SEP-2005 (first entry)
 XX
 XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:48.
 XX
 KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmadum infection; meningitis; hepatitis; Alzheimers disease;
 KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutein.
 XX
 XX Homo sapiens.
 OS Synthetic.
 XX
 XX WO2005066206-A1.
 XX
 XX 21-JUL-2005.
 XX
 XX 05-JAN-2005; 2005WO-JP000032.
 XX
 XX 06-JAN-2004; 2004JP-00001427.
 XX
 XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 XX (MAYU/) MAYUMI T.
 XX (TSUT/) TSUTSUMI Y.
 XX (NAKA/) NAKAGAWA S.
 XX
 XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 XX
 XX WPI; 2005-506850/51.
 XX N-PSDB; AEB45487.
 XX
 XX Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.
 XX
 XX Claim 5; SEQ ID NO 48; 34pp; Japanese.
 XX
 XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
 XX particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pt_sequences.
 XX
 XX Sequence 157 AA;
 SQ
 Query Match 97.2%; Score 791; DB 9; Length 157;
 Best Local Similarity 96.8%; Pred. No. 2.1e-73;
 Matches 152; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDMPVAHVYVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDMPVAHVYVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX Sequence 157 AA;

Query Match 97.2%; Score 791; DB 9; Length 157;
 Best Local Similarity 96.8%; Pred. No. 2.3e-73;
 Matches 152; Conservative 1; Mismatches 4; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
 QY 61 QVLFSGQGPCSTHVLTTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
 DB 61 QVLFSGQGPCSTHVLTTHTTISRITAYSGPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157

RESULT 15
 AEB45472
 ID AEB45472 standard; protein; 157 AA.
 XX AEB45472;
 AC AEB45472;
 XX 22-SEP-2005 (first entry)
 XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:56.
 XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmoidium infection; meningitis; hepatitis; Alzheimer's disease;
 KW antiinflammatory; cyclostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutain.
 XX Homo sapiens.
 OS Synthetic.
 XX WO2005066206-A1.
 PN 21-JUL-2005.
 XX 05-JAN-2005; 2005WO-JP0000032.
 XX 06-JAN-2004; 2004JP-00001427.
 XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 PA (MAYU/) MAYUMI T.
 PA (TSUT/) TSUTSUMI Y.
 PA (NAKA/) NAKAGAWA S.
 XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 PI WPI; 2005-506850/51.
 XX N-PSDB; AEB45495.
 XX Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.

PS Claim 5; SEQ ID NO 56; 34pp; Japanese.

XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX Sequence 157 AA;

Query Match 97.1%; Score 790; DB 9; Length 157;
 Best Local Similarity 96.8%; Pred. No. 2.9e-73;
 Matches 152; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
 QY 61 QVLFSGQGPCSTHVLTTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
 DB 61 QVLFSGQGPCSTHVLTTHTTISRISHTYHPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157

Search completed: May 5, 2006, 11:26:32
 Job time : 74.25 secs

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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:42 ; Search time 18 seconds
(without alignments)
839.224 Million cell updates/sec

Title: US-10-668-178-3
Perfect score: 814
Sequence: 1 VRSSRTSDMPVAHVANP.....RPDYLDFAESGVYFGIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 80.*
1: pir1.*
2: pir2.*
3: pir3.*
4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	779	95.7	233	1 QWHUN	tumor necrosis fac
2	772	94.8	233	1 S22052	tumor necrosis fac
3	712	87.5	233	2 S11688	tumor necrosis fac
4	697	85.6	234	1 JQ1344	tumor necrosis fac
5	677.5	83.2	232	1 S12606	tumor necrosis fac
6	634.5	77.9	235	1 QWMSN	tumor necrosis fac
7	633.5	77.8	234	1 A25451	tumor necrosis fac
8	631	77.5	185	2 S52715	tumor necrosis fac
9	631	77.5	233	1 S24642	tumor necrosis fac
10	629	77.3	234	1 JH0529	tumor necrosis fac
11	628.5	77.2	235	2 I54490	tumor necrosis fac
12	624.5	76.7	235	2 S06192	tumor necrosis fac
13	619.5	76.1	235	2 JU0029	tumor necrosis fac
14	258.5	31.8	197	1 JH0309	tumor necrosis fac
15	250.5	30.8	204	1 S24641	lymphotoxin - bovi
16	247.5	30.4	204	1 S17289	tumor necrosis fac
17	238	29.2	202	1 JN0869	tumor necrosis fac
18	236.5	29.1	202	1 B27303	tumor necrosis fac
19	213.5	26.2	205	1 QWHUX	lymphotoxin alpha
20	173	21.3	244	2 A46066	lymphotoxin beta -
21	166.5	20.5	278	2 A49266	Fas ligand - mouse
22	161.5	19.8	279	2 A53062	Fas ligand - rat
23	149	18.3	281	2 I38707	Fas ligand - human
24	143	17.6	306	2 I49139	lymphotoxin-beta -
25	129	15.8	261	2 I53476	CD40 ligand - huma
26	127	15.6	260	2 S21738	CD40 ligand - mous
27	116	14.3	261	2 S53090	CD40 ligand - bovi
28	80	9.8	1560	2 T09202	probable tail comp
29	77.5	9.5	675	2 E75393	hypothetical prote

RESULT 1

QWHUN

tumor necrosis factor alpha precursor [validated] - human
N;Alternate names: cachectin; TNFA

C;Species: Homo sapiens (man)

C;Date: 28-Aug-1985 #sequence revision 28-Aug-1985 #text change 09-Jul-2004

C;Accession: A93585; S36153; A93351; A44189; B61478; I53311; S62610; I54522; A01646; B2

R;Nedwin, G.E.; Naylor, S.L.; Sakaguchi, A.Y.; Smith, D.; Jarrett-Nedwin, J.; Pennica, I

Nucleic Acids Res. 13, 6361-6373, 1985

A;Title: Human lymphotoxin and tumor necrosis factor genes: structure, homology and chr

A;Reference number: A93585; MUID:86016093; PMID:2995927

A;Accession: A93585

A;Molecule type: DNA

A;Residues: 1-233 <NED>

A;Cross-references: UNIPROT:P01375; UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:93

R;Iris, F.J.M.; Bougueleret, L.; Frieur, S.; Caterina, D.; Primas, G.; Perrot, V.; Jurk

Nature Genet. 3, 137-145, 1993

A;Title: Dense Alu clustering and a potential new member of the NFkappaB family within

A;Reference number: S36152; MUID:93272029; PMID:8499947

A;Accession: S36153

A;Status: nucleic acid sequence not shown; translation not shown

A;Molecule type: DNA

A;Residues: 1-233 <IRI>

A;Cross-references: UNIPARC:UPI000000D745; EMBL:Z15026; NID:937211; PIDN:CAA78745.1; PI

A;Note: the nucleotide sequence was submitted to the EMBL Data Library, August 1992

R;Pennica, D.; Nedwin, G.E.; Hayflick, J.S.; Seeburg, P.H.; Derynck, R.; Palladino, M.A

Nature 312, 724-729, 1984

A;Title: Human tumour necrosis factor: precursor structure, expression and homology to

A;Reference number: A93351; MUID:85086244; PMID:6392892

A;Accession: A93351

A;Molecule type: mRNA

A;Residues: 1-233 <PEN>

A;Cross-references: UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:937209; PIDN:CAA26

A;Note: this protein was isolated from the monocyte-like cell line HL-60 from a promyel

R;Wang, A.M.; Creasey, A.A.; Ladner, M.B.; Lin, L.S.; Strickler, J.; Van Arsdel, J.N.;

Science 228, 149-154, 1985

A;Title: Molecular cloning of the complementary DNA for human tumor necrosis factor.

A;Reference number: A44189; MUID:85142190; PMID:3856324

A;Accession: A44189

A;Molecule type: mRNA

A;Residues: 1-62, 'S', 64-233 <WAN>

A;Cross-references: UNIPARC:UPI000002FB8A; GB:M10988; NID:9339737; PIDN:AAA61198.1; PID

R;Fukuda, S.; Ando, S.; Sanou, O.; Tanai, M.; Masaki, N.; Nakamura, K.I.; A

Lymphokine Res. 7, 175-185, 1988

A;Title: Simultaneous production of natural human tumor necrosis factor-alpha, -beta an

A;Reference number: A61478; MUID:88301617; PMID:2841543

A;Accession: B61478

A;Molecule type: protein

A;Residues: 83-102; 109-119; 121-128, 'X', 130-131; 142-144, 'X', 146, 'XXX', 150-152; 159-174; 18

A;Cross-references: UNIPARC:UPI00001735C7; UNIPARC:UPI00001735C8; UNIPARC:UPI00001735C9

R;Marmenout, A.; Fransen, L.; Tavernier, J.; Van Der Heyden, J.; Tizard, R.; Kawashima,

Eur. J. Biochem. 152, 515-522, 1985

A:Title: Molecular cloning and expression of human tumor necrosis factor and comparison
A:Reference number: I53311, MUID:86030296; PMID:3932069
A:Accession: I53311
A:Status: translated from GB/EMBL/DBDJ
A:Molecule type: DNA
A:Residues: 1-233 <MAR>
A:Cross-references: UNIPARC:UPI000000D745; GB:M26331; NID:G339763; PIDN:AAA36758.1; PID:
A:Experimental source: U-937 cells
A:Refakura-Yamamoto, R.; Yamamoto, S.; Fukuda, S.; Kurimoto, M.
Eur. J. Biochem. 235, 431-437, 1996
A:Title: O-Glycosylated species of natural human tumor-necrosis factor-alpha.
A:Reference number: S62610; MUID:96202967; PMID:8631363
A:Accession: S62610
A:Molecule type: protein
A:Residues: 77-99 <RA>
A:Cross-references: UNIPARC:UPI00001735CD
R:D'Alfonso, S.; Richiardi, P.M.
Immunogenetics 39, 150-154, 1994
A:Title: A polymorphic variation in a putative regulation box of the TNFA promoter region
A:Reference number: I54522; MUID:94102809; PMID:7903959
A:Accession: I54522
A:Status: preliminary; translated from GB/EMBL/DBDJ
A:Molecule type: DNA
A:Residues: 1-8 <DAL>
A:Cross-references: UNIPARC:UPI00001735CE; GB:S68530; NID:G544751
R:Stevenson, F.T.; Bursten, S.L.; Locksley, R.M.; Lovett, D.H.
J. Exp. Med. 176, 1053-1062, 1992
A:Title: Myristyl acylation of the tumor necrosis factor alpha precursor on specific lys
A:Reference number: A59163; MUID:93018820; PMID:1402651
A:Contents: annotation; identification of myristylated lysines
R:Aggarwal, B.B.; Kohr, W.J.; Haas, P.E.; Moffat, B.; Spencer, S.A.; Henzel, W.J.; Bring
J. Biol. Chem. 260, 2345-2354, 1985
A:Title: Human tumor necrosis factor. Production, purification, and characterization.
A:Reference number: A92511; MUID:85130974; PMID:3871770
A:Contents: annotation; disulfide bond
C:Comment: Secreted from mitogen-activated macrophages within 4-24 hours after induction
out detriment to normal cells. It can also act synergistically with interferon gamma to
C:Comment: TNF-alpha and -beta (lymphotoxin) are the products of different genes closely
ut are produced by different cell types and have different induction kinetics.
C:Genetics:
A:Gene: GDB:TNF; TNFA
A:Cross-references: GDB:120441; OMIM:191160
A:Map position: 6p21.3-6p21.3
A:Introns: 62/3; 78/1; 94/1
C:Complex: homotrimer
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; homotrimer; lipoprotein; lymphokine; mac
F:1-76/Domain: propeptide #status predicted <PRO>
F:77-233/Product: tumor necrosis factor #status experimental <MAT>
F:19 20/Binding site: myristate (Lys) (covalent) #status experimental
F:81/Binding site: carboxylate (Ser) (covalent) (partial) #status experimental
F:145-177/Disulfide bonds: #status experimental

Query Match 95.7%; Score 779; DB 1; Length 233;
Best Local Similarity 96.2%; Pred. No. 4.9e-72;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
Db 77 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 136

Qy 61 QVLFSGQGCPSHVLTHLTISRIVSYQTPVNLISAIKSPQRETPEGAENPWEPIYL 120
Db 137 QVLFSGQGCPSHVLTHLTISRIVSYQTPVNLISAIKSPQRETPEGAENPWEPIYL 196

Qy 121 GGVFQLEPGDRLSABINRPDYLDFAESQGVFGIIAL 157
Db 197 GGVFQLEKGDRLSABINRPDYLDFAESQGVFGIIAL 233

RESULT 2
S22052
tumor necrosis factor alpha precursor - baboon

C:Species: Papio sp. (baboon)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: S22052
R:Sanjanwala, M.; Edwards, A.
A:Description: Baboon Tumor Necrosis Factor Derived from Sequences of Genomic DNA.
A:Reference number: S22052
A:Accession: S22052
A:Status: Preliminary
A:Molecule type: DNA
A:Residues: 1-233 <SAN>
A:Cross-references: UNIPROT:P33620; UNIPARC:UPI00001370C4; EMBL:X62141; NID:G38159; PID:
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19 20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carboxylate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 94.8%; Score 772; DB 1; Length 233;
Best Local Similarity 95.5%; Pred. No. 2.5e-71;
Matches 150; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
Db 77 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 136

Qy 61 QVLFSGQGCPSHVLTHLTISRIVSYQTPVNLISAIKSPQRETPEGAENPWEPIYL 120
Db 137 QVLFSGQGCPSHVLTHLTISRIVSYQTPVNLISAIKSPQRETPEGAENPWEPIYL 196

Qy 121 GGVFQLEPGDRLSABINRPDYLDFAESQGVFGIIAL 157
Db 197 GGVFQLEKGDRLSABINRPDYLDFAESQGVFGIIAL 233

RESULT 3
S11688
tumor necrosis factor alpha precursor - cat
C:Species: Felis silvestris catus (domestic cat)
C:Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C:Accession: S11688
R:McGraw, R.A.; Coffee, B.W.; Otto, C.M.; Drews, R.T.; Rawlings, C.A.
Nucleic Acids Res. 18, 5563, 1990
A:Title: Gene sequence of feline tumor necrosis factor alpha.
A:Reference number: S11688; MUID:91016860; PMID:2216740
A:Accession: S11688
A:Status: Preliminary
A:Molecule type: DNA
A:Residues: 1-233 <MCG>
A:Cross-references: UNIPROT:P19101; UNIPARC:UPI00001370BE; EMBL:X54000; NID:G1084; PID:
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19 20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carboxylate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 87.5%; Score 712; DB 2; Length 233;
Best Local Similarity 88.5%; Pred. No. 3.4e-65;
Matches 139; Conservative 6; Mismatches 12; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
Db 77 LRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELTDNLQVPSDGLYLIYS 136

Qy 61 QVLFSGQGCPSHVLTHLTISRIVSYQTPVNLISAIKSPQRETPEGAENPWEPIYL 120
Db 137 QVLFSGQGCPSHVLTHLTISRIVSYQTPVNLISAIKSPQRETPEGAENPWEPIYL 196

Qy 121 GGVFQLEPGDRLSABINRPDYLDFAESQGVFGIIAL 157

Db 197 GGVFQLEKGDRLSTEINLPAYLDFAESGGVYFGIIAL 233
||||| ||||| ||| ||| ||||| ||||| ||||| |||||

RESULT 4

QJ1344
tumor necrosis factor alpha precursor - horse
N:Alternate names: cachectin; TNF alpha
C:Species: Equus caballus (domestic horse)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: JQ1344
R:Su, X.; Morris, D.D.; McGraw, R.A.
Gene 107, 319-321, 1991
A:Title: Cloning and characterization of gene TNF alpha encoding equine tumor necrosis factor
A:Reference number: JQ1344; MUID:92084125; PMID:1748301
A:Accession: JQ1344
A:Molecule type: DNA
A:Residues: 1-234 <SUX>
A:Cross-references: UNIPROT:P29553; UNIPARC:UPI00001370BF; GB:M64087; NID:g164244; PIDN:
C:Comment: This protein is an important proximal mediator of endotoxemia.
C:Genetics:
A:Gene: TNF-alpha
A:Introns: 62/3; 79/1; 95/1
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; mem
F:19-20/Binding site: myristate (Lys) (covalent) #status predicted
F:82/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:146-178/Disulfide bonds: #status predicted

Query Match 85.6%; Score 697; DB 1; Length 234;
Best Local Similarity 85.4%; Pred. No. 1.2e-63;
Matches 134; Conservative 11; Mismatches 12; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
78 LRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 137
QY 61 QVLFSGGCGPSTHVLTHTRISAVSYQTPVNLSSAIRSPCQRETEGAEANPWYPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 138 QVLFSGGCGPSTHVLTHTRISAVSYQTPVNLSSAIRSPCQRETEGAEANPWYPIYL 197

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 198 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 234

RESULT 5

S12606
tumor necrosis factor alpha precursor - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: S12606; S17290; S18965; I46659
R:Drews, R.T.; Coffee, B.W.; Prestwood, A.K.; McGraw, R.A.
Nucleic Acids Res. 18, 5564, 1990
A:Title: Gene sequence of porcine tumor necrosis factor alpha.
A:Reference number: S12606; MUID:91016861; PMID:2216741
A:Accession: S12606
A:Molecule type: DNA
A:Residues: 1-232 <DRE>
A:Cross-references: UNIPROT:P23563; UNIPARC:UPI00001370C6; EMBL:X54001; NID:g21135; PIDN:
R:Kuhnert, P.; Wuehrich, C.; Peterhans, E.; Pauli, U.
Gene 102, 171-178, 1991
A:Title: The porcine tumor necrosis factor-encoding genes: sequence and comparative anal
A:Reference number: S17289; MUID:91340150; PMID:1874444
A:Accession: S17290
A:Molecule type: DNA
A:Residues: 1-232 <KUH>
A:Cross-references: UNIPARC:UPI00001370C6; EMBL:X54859; NID:g21132; PIDN:CAA38639.1; PID:
R:Choi, C.S.; Molitor, T.W.; Lin, G.F.; Murtaugh, M.P.
submitted to the EMBL Data Library, January 1991
A:Description: Complete nucleotide sequence of a cDNA encoding porcine tumor necrosis fa

A:Reference number: S18965
A:Accession: S18965
A:Molecule type: mRNA
A:Residues: 1-232 <CHO>
A:Cross-references: UNIPARC:UPI00001370C6; EMBL:X57321; NID:g21137; PIDN:CAA40591.1; PID:
R:Pauli, U.; Beutler, B.; Peterhans, E.
Gene 81, 185-191, 1989
A:Title: Porcine tumor necrosis factor alpha: Cloning with the polymerase chain reaction
A:Reference number: I46659; MUID:90034181; PMID:2478420
A:Accession: I46659
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 44-232 <PAU>
A:Cross-references: UNIPARC:UPI000016CGF7; GB:M29079; NID:g164694; PIDN:AAA31128.1; PID:
C:Genetics:
A:Introns: 62/3; 78/1; 93/1
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; myr
F:1-77/Domain: propeptide #status predicted <PRO>
F:78-232/Product: tumor necrosis factor alpha #status predicted <MAT>
F:19-20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:144-176/Disulfide bonds: #status predicted

Query Match 83.2%; Score 677.5; DB 1; Length 232;
Best Local Similarity 85.4%; Pred. No. 1.1e-61;
Matches 134; Conservative 10; Mismatches 12; Indels 1; Gaps 1;

QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
77 LRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 135
QY 61 QVLFSGGCGPSTHVLTHTRISAVSYQTPVNLSSAIRSPCQRETEGAEANPWYPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 136 QVLFSGGCGPSTHVLTHTRISAVSYQTPVNLSSAIRSPCQRETEGAEANPWYPIYL 195

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 196 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 232

RESULT 6
QWMSN
tumor necrosis factor alpha precursor - mouse
N:Alternate names: cachectin; TNF alpha
C:Species: Mus musculus (house mouse)
C:Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 09-Jul-2004
C:Accession: A22908; S03791; A27303; A25164; A23127; A34251; I59058; A36696
R:Shirai, T.; Shimizu, N.; Shiojiri, S.; Horiguchi, S.; Ito, H.
DNA 7, 193-201, 1988
A:Title: Cloning and expression in Escherichia coli of the gene for mouse tumor necrosi
A:Reference number: A22908; MUID:88224564; PMID:2836146
A:Accession: A22908
A:Molecule type: DNA
A:Residues: 1-235 <SHI>
A:Cross-references: UNIPROT:P06804; UNIPARC:UPI0000022334; GB:M20155
R:Shakhov, A.N.; Nedospasov, S.A.
Biorg. Khim. 13, 701-705, 1987
A:Title: Molecular cloning of the genes coding for tumor necrosis factors: complete nuc
A:Reference number: S03791; MUID:87298639; PMID:3040015
A:Accession: S03791
A:Molecule type: DNA
A:Residues: 1-235 <SHA>
A:Cross-references: UNIPARC:UPI0000022334; GB:M38296; NID:g202086; PIDN:AAA40459.1; PID:
A:Note: article in Russian with English abstract
R:Semon, D.; Kawashima, E.; Jongeneel, C.V.; Shakhov, A.N.; Nedospasov, S.A.
Nucleic Acids Res. 15, 9083-9084, 1987
A:Title: Nucleotide sequence of the murine TNF locus, including the TNF-alpha-(tumor ne
A:Reference number: A93679; MUID:88067722; PMID:3684584
A:Accession: A27303
A:Molecule type: DNA
A:Residues: 1-235 <SEM>
A:Cross-references: UNIPARC:UPI0000022334; GB:Y00467; NID:g54830; PIDN:CAA68530.1; PID:

Best Local Similarity 75.2%, Pred. No. 1.2e-56;
Matches 118; Conservative 21; Mismatches 17; Indels 1; Gaps 1;

Qy 1 VRSSRTPSPMPVAHVAVNPAQGQLQWLNRANALLANGVELRDNLQVVPSEGLYLIYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 80 LRSSSQSSDKPVAHVAVNPAQVEQLWLSRGANALLANGMDLKDNLQVTPADGLYLVIYS 139
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 61 QVLFSGGGCPSTHLLTHTTSRIASVSYQTVPVLLSAIRSCQRETPPGAEBANPWYEPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 140 QVLFPKGQC-SSYVLLTHTVSRAVSVYEDKVNLLSAIIKSPCKETPGSELKPWEPIYL 198
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 199 GGVFQLEKGRLSAEVNLPRYLDFAESGVYFGVIAL 235
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

RESULT 12

S06192
tumor necrosis factor alpha precursor - goat (fragment)
N;Alternate names: cachectin; TNF alpha
C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 09-Jul-2004
C;Accession: S06192; S41867
R;Goldstein, I.M.; Henner, D.; Talhouk, A.
submitted to the EMBL Data Library, March 1989
A;Reference number: S06192
A;Accession: S06192
A;Molecule type: mRNA
A;Residues: 1-193 <GOL>
A;Cross-references: UNIPROT:P13296; UNIPARC:UI0000016C3FD; EMBL:X14828; NID:g992; PIDN:C
R;Rimstad, E.
submitted to the EMBL Data Library, January 1994
A;Reference number: S41867
A;Accession: S41867
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 35-38, 'S', 40-78, 'A', 80-88, 'N', 90-114, 'Q', 116-123, 'D', 125-144, 'G', 145-173, 'I',
A;Cross-references: UNIPARC:UI0000016C3FE; EMBL:X77317; NID:g452607; PIDN:CAA54523.1; PT
C;Superfamily: tumor necrosis factor
C;Keywords: cytokine; cytotoxin; glycoprotein; lymphokine; macrophage; membrane protein
F;42/Binding site: carbonylase (Ser) (covalent) #status predicted
F;106-138/Diulfide bonds: #status predicted

Query Match 76.7%; Score 624.5; DB 2; Length 193;
Best Local Similarity 78.3%; Pred. No. 2.4e-56;
Matches 123; Conservative 14; Mismatches 19; Indels 1; Gaps 1;

Qy 1 VRSSRTPSPMPVAHVAVNPAQGQLQWLNRANALLANGVELRDNLQVVPSEGLYLIYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 38 LRSSSQSSKNKPAHVAVNAPQLRWGDSYANALKANGVELKDNLQVVPTDGLYLIYS 97
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 61 QVLFSGGGCPSTHLLTHTTSRIASVSYQTVPVLLSAIRSCQRETPPGAEBANPWYEPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 98 QVLFRHGCGESTPLFLTHTTSRIASVSYQTKNILSAIKSCHRETPE-AEAKPWYEPIYQ 156
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 157 GGVFQLEKGRLSAEINQPYYLDFAESGVYFGIIAL 193
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

RESULT 13

JU0029
tumor necrosis factor alpha precursor - rat
N;Alternate names: cachectin; TNF alpha
C;Species: Rattus norvegicus (Norway rat)
C;Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 09-Jul-2004
C;Accession: JU0029; JN0868; S21674
R;Shirai, T.; Shimizu, N.; Horiguchi, S.; Ito, H.
Agric. Biol. Chem. 53, 1733-1736, 1989
A;Title: Cloning and expression in Escherichia coli of the gene for rat tumor necrosis f
A;Reference number: JU0029
A;Accession: JU0029
A;Molecule type: DNA

C:keywords: cytokine; cytotoxin; glycoprotein; lymphokine; macrophage
F:1-26/Domain: signal sequence #status predicted <SIG>
F:27-197/Product: lymphotoxin #status predicted <MAT>

Query Match 31.8%; Score 258.5; DB 1; Length 197;
Best Local Similarity 40.0%; Pred. No. 6.4e-19;
Matches 60; Conservative 21; Mismatches 58; Indels 11; Gaps 4;

QY 12 PVAVVNPQAGCQQLWLNRRANALLANGVELRDQNLVVPSEGLYLIYSQVLFSGGCGCP- 70
DB 55 PAAHLVGDPSAQDSLRLWRANTDRAFLRHGFSLSNNSLVPSGLYFYVSQVWFSGGCGSP 114
QY 71 ---STHVLTLHTTISRIVASYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYLGGVFQLE 127
DB 115 KAVTPLYLAHEVQLFSSQYSHVPLLSAQKVC--PGPQG----PWRSVYQGAFLLT 168
QY 128 PGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 169 QGDQLSTHTDGTIAHLLSPS-SVFFGAFAL 197

RESULT 15
S24641
lymphotoxin - bovine
C:Species: Bos primigenius taurus (cattle)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: I46046; S24641
R:Clutds, I.; Cleuter, Y.; Kettmann, R.; Burny, A.; Droogmans, L.
Cytokine 5, 336-341, 1993
A:Title: Cloning and characterization of the tandemly arranged bovine lymphotoxin and tu
A:Reference number: I46046; MUID:94083525; PMID:8260599
A:Accession: I46046
A:Status: preliminary; translated from CB/EMBL/DDBJ
A:Molecule type: DNA
A:Residues: 1-204 <CL2>
A:Cross-references: UNIPROT:Q06600; UNIPARC:UPI00001370CA; EMBL:Z14137; NID:g796; PIDN:C
C:Genetics:
A:Introns: 32/3; 68/1
C:Superfamily: tumor necrosis factor

Query Match 30.8%; Score 250.5; DB 1; Length 204;
Best Local Similarity 38.7%; Pred. No. 4.4e-18;
Matches 58; Conservative 22; Mismatches 59; Indels 11; Gaps 4;

QY 12 PVAVVNPQAGCQQLWLNRRANALLANGVELRDQNLVVPSEGLYLIYSQVLFSGGCGC-- 69
DB 62 PAAHLVGDPSQDSLRLWRANTDRAFLRHGFSLSNNSLVPSGLYFYVSQVWFSGGCGFP 121
QY 70 --PSTHVLTLHTTISRIVASYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYLGGVFQLE 127
DB 122 RATPTPLYLAHEVQLFSPQYFHVPLLSAQKVC--PGPQG----PWRSVYQGAFLLT 175
QY 128 PGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 176 RGDQLSTHTDGTISHLLSPS-SVFFGAFAL 204

Search completed: May 5, 2006, 11:27:50
Job time : 20 secs

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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:53 ; Search time 53.5 seconds
(without alignments)
2070.429 Million cell updates/sec

Title: US-10-668-178-3

Perfect score: 814

Sequence: 1 VRSSKRTSDMPVAHVANP.....RPDYLDFABSGVYFGIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Uniprot 05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	779	95.7	233	1 TNFA_HUMAN	P01375 homo sapien
2	779	95.7	233	2 Q5STB3_HUMAN	Q5stb3 homo sapien
3	772	94.8	233	1 TNFA_PASP	P33620 papio sp. (
4	770	94.6	233	1 TNFA_PANTR	Q8hed9 pan troglod
5	761	93.5	233	1 TNFA_MACMU	F48094 macaca mula
6	758	93.1	233	1 TNFA_MACFA	P79337 macaca fasc
7	757	93.0	233	1 TNFA_PAPHU	O77510 papio hamad
8	754	92.6	233	1 TNFA_PAPAN	P59695 papio anubi
9	744	91.4	149	2 Q97543_AOTNA	P51742 canis fami
10	738	90.7	233	1 TNFA_CANFA	P19101 felis silve
11	731	89.8	233	1 TNFA_FELCA	O8mk98 saimir sci
12	708	87.0	233	1 TNFA_SAISC	O97538 actus vocif
13	702	86.2	149	2 Q97538_AOTNO	O97538 actus nigri
14	702	86.2	149	2 Q97538_AOTNI	P29553 equus cabal
15	697	85.6	234	1 TNFA_HORSE	Q9be90 cyclopes di
16	691	84.9	217	2 Q9BEG0_CYCDI	Q9be91 bradypus tr
17	687	84.4	217	2 Q9BEG1_BRATR	O8wnr1 delphinapte
18	679	83.4	233	1 TNFA_DELLE	P23563 sus scrofa
19	677.5	83.2	232	1 TNFA_PIG	P23563 sus scrofa
20	661	81.2	233	1 TNFA_TURTR	Q9bea1 turiolepis tr
21	652	80.1	217	2 Q9BEP4_CABUN	Q9bea4 cabassous u
22	649	79.7	138	2 Q9TTG7_AOTLE	Q9ttg7 actus lemur
23	641	78.7	234	1 TNFA_CAPHI	P13296 capra hircu
24	638	78.4	234	2 Q53ZM5_CAPHI	Q53zm5 capra hircu
25	637.5	78.3	234	1 TNFA_CAVPO	P51435 cavita porce
26	635	78.0	216	2 Q9BEC4_TALEU	Q9bec4 talpa europ
27	634.5	77.9	235	1 TNFA_MOUSE	P06804 mus musculu
28	633.5	77.8	235	1 TNFA_RABIT	P04924 coryctolagus
29	633	77.8	234	2 Q539C2_TUPTA	Q539c2 tupiaia tana
30	632	77.6	229	1 TNFA_CEREL	P51743 cervus elap
31	631	77.5	233	1 TNFA_BOVIN	Q06599 bos taurus

32 631 77.5 233 1 TNFA_BUBBU P59693 bubalus bub
33 631 77.5 234 1 TNFA_BOSIN P59684 bos indicus
34 629 77.3 234 1 TNFA_SHEEP P23383 ovis aries
35 628.5 77.2 235 1 TNFA_PERLE P36939 peromyscus
36 628.5 76.6 235 2 Q5W9H9_MERUN Q5w9h9 meriones un
37 622.5 76.5 232 2 Q80XAA_PERMA Q80xa4 peromyscus
38 619.5 76.1 235 1 TNFA_RAT P16599 rattus norv
39 619.5 76.1 235 2 Q6EE11_RAT Q6ee11 rattus norv
40 617 75.8 233 1 TNFA_CAMBA Q75283 camelus bac
41 617 75.8 233 1 TNFA_LAMGL P59694 lama glama
42 611.5 75.1 156 2 Q91ZL4_SIGHI Q91z14 sigmodon hi
43 604.5 74.3 233 1 TNFA_MARMO Q35734 marmota mon
44 604.5 74.3 233 2 Q6X658_MARMO Q6x658 marmota mon
45 601.5 73.9 216 2 Q9BEC9_OCHPR Q9bec9 ochotona pr

ALIGNMENTS

RESULT 1
TNFA_HUMAN STANDARD: PRT; 233 AA.
AC P01375; Q43647; Q9P1Q2; Q9UIV3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSP2;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo
OX NCBJ_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87217060; PubMed=3555974;
RA Nedospasov S.A., Shakhov A.N., Turetskaya R.L., Mett V.A.,
RA Azizov M.M., Georgiev G.P., Korobko V.G., Dobrynin V.N.,
RA Filippov S.A., Bystrov N.S., Boldyreva E.F., Chuvpilo S.A.,
RA Chumakov A.M., Shingarova L.N., Ovchinnikov Y.A.;
RT "Tandem arrangement of genes coding for tumor necrosis factor (TNF-
alpha) and lymphotoxin (TNF-beta) in the human genome.";
RN Cold Spring Harb. Symp. Quant. Biol. 51:611-624(1986).
[2]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=85086244; PubMed=6392892;
RX Pennica D., Nedwin G.E., Hayflick J.S., Seeburg P.H., Derynck R.,
Palladino M.A., Kohr W.J., Aggarwal B.B., Goeddel D.V.;
RA "Human tumor necrosis factor: precursor structure, expression and
RT homology to lymphotoxin";
RN Nature 312:724-729(1984).
[3]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=85137898; PubMed=3883195;
RX Shirai T., Yamaguchi H., Ito H., Todd C.W., Wallace R.B.;
RT "Cloning and expression in Escherichia coli of the gene for human
RT tumor necrosis factor.";
RN Nature 313:803-806(1985).
[4]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=86016093; PubMed=2995927;
RX Nedwin G.E., Naylor S.L., Sakaguchi A.Y., Smith D.H.,
Jarrrett-Nedwin J., Pennica D., Goeddel D.V., Gray P.W.;
RT "Human lymphotoxin and tumor necrosis factor genes: structure,
RT homology and chromosomal localization.";
RN Nucleic Acids Res. 13:6361-6373(1985).
[5]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=85142190; PubMed=3856324;
RX Wang A.M., Creasey A.A., Ladner M.B., Lin L.S., Strickler J.,
van Arsdel J.N., Yamamoto R., Mark D.F.;

- RT "Molecular cloning of the complementary DNA for human tumor necrosis factor."; Science 228:149-154(1985).
- RL [16]
- RP NUCLEOTIDE SEQUENCE. PubMed=3932069;
- RX MEDLINE=86030296;
- RA Marmenout A., Franssen L., Tavernier J., van der Heyden J., Tizard R., Kawashima E., Shaw A., Johnson M.J., Semon D., Mueller R., Ruysschaert M.R., van Vliet A., Fiers W.;
- RA "Molecular cloning and expression of human tumor necrosis factor and comparison with mouse tumor necrosis factor."; Eur. J. Biochem. 152:515-522(1985).
- RL [7]
- RP NUCLEOTIDE SEQUENCE.
- RX MEDLINE=93272029; PubMed=8499947;
- RA Iris F.J.M., Bouguerelet L., Prieur S., Caterina D., Primas G., Perrot V., Jurka J., Rodriguez-Tome P., Claverie J.-M., Dausset J., Cohen D.;
- RA "Denase Alu clustering and a potential new member of the NF kappa B family within a 90 kilobase HLA class III segment."; Nat. Genet. 3:137-145(1993).
- RL [8]
- RP NUCLEOTIDE SEQUENCE.
- RX MEDLINE=99218514; PubMed=10202016;
- RA Neville M.J., Campbell R.D.;
- RA "A new member of the Ig superfamily and a V-ATPase G subunit are among the predicted products of novel genes close to the TNF locus in the human MHC."; J. Immunol. 162:4745-4754(1999).
- RL [9]
- RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
- RX PubMed=14656967; DOI=10.1101/gr.1736803;
- RA Xie T., Rowen L., Aguado B., Ahearn M.E., Madan A., Qin S., Campbell R.D., Hood L.;
- RA "Analysis of the gene-dense major histocompatibility complex class III region and its comparison to mouse."; Genome Res. 13:2621-2636(2003).
- RL [10]
- RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
- RA Shiina S., Tamiya G., Oka A., Inoko H.;
- RA "Homo sapiens 2,229,817bp genomic DNA of 6p21.3 HLA class I region."; Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.
- RL [11]
- RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
- RA Shiina T., Ota M., Katsuyama Y., Hashimoto N., Inoko H.;
- RA "Genome diversity in HLA: a new strategy for detection of genetic polymorphisms in expressed genes within the HLA class III and class I regions."; Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
- RL [12]
- RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
- RA Rieder M.J., Carrington D.P., Chung M.-W., Lee K.L., Poel C.L., Yi Q., Nickerson D.A.;
- RA "SeattleSNPs. NHLBI HL6682 program for genomic applications, UW-PHRC, Seattle, WA (URL: <http://pga.gs.washington.edu>)"; Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.
- RL [13]
- RP NUCLEOTIDE SEQUENCE [GENOMIC DNA], AND VARIANT LEU-84.
- RA Rieder M.J., Livingston R.J., Daniels M.R., Montoya M.A., Chung M.-W., Miyamoto K.E., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Witrak L.A., Nickerson D.A.;
- RA "NIHS-SNPs, environmental genome project, NIHS ES15478, Department of Genome Sciences, Seattle, WA (URL: <http://esg.gs.washington.edu>)"; Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
- RL [14]
- RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
- RC TISSUE=Blood;
- RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
- RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Brownstein M.J., Ustin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.A., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
- RT "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
- RL [15]
- RP NUCLEOTIDE SEQUENCE OF 77-233.
- RA Jang J.S., Kim B.E.;
- RA Submitted (JAN-1998) to the EMBL/GenBank/DBJ databases.
- RL [16]
- RP NUCLEOTIDE SEQUENCE OF 84-214.
- RC TISSUE=Prostatic carcinoma;
- RA Shao C., Yan W., Zhu F., Yue W., Chai Y., Zhao Z., Wang C.;
- RA Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.
- RL [17]
- RP PHOSPHORYLATION (MEMBRANE FORM).
- RX MEDLINE=96170872; PubMed=8597870;
- RA Pocsik E., Duda E., Wallach D.;
- RA "Phosphorylation of the 26 kDa TNF precursor in monocytic cells and in transfected HeLa cells."; J. Inflamm. 45:152-160(1995).
- RL [18]
- RP PHOSPHORYLATION BY CKI, AND DEPHOSPHORYLATION
- RX MEDLINE=99221847; PubMed=10205166; DOI=10.1093/emboj/18.8.2119;
- RA Watts A.D., Hunt N.H., Wanigasekara Y., Bloomfield G., Wallach D., Roufogalis B.D., Chaudhri G.;
- RA "A casein kinase I motif present in the cytoplasmic domain of members of the tumor necrosis factor ligand family is implicated in 'reverse signalling'."; EMBO J. 18:2119-2126(1999).
- RL [19]
- RP MUTAGENESIS.
- RX MEDLINE=91184128; PubMed=2009860;
- RA Ostade X.V., Tavernier J., Prange T., Fiers W.;
- RA "Localization of the active site of human tumor necrosis factor (hTNF) by mutational analysis."; EMBO J. 10:827-836(1991).
- RL [20]
- RP MYRISTOYLATION.
- RX MEDLINE=93018820; PubMed=1402651; DOI=10.1084/jem.176.4.1053;
- RA Stevenson F.T., Bursten S.L., Locksley R.M., Lovett D.H.;
- RA "Myristyl acylation of the tumor necrosis factor alpha precursor on specific lysine residues."; J. Exp. Med. 176:1053-1062(1992).
- RL [21]
- RP CLEAVAGE BY ADAM17.
- RX MEDLINE=97186575; PubMed=9034191;
- RA Moss M.L., Jin S.-L.C., Milla M.E., Burkhardt W., Carter H.L., Chen W.-J., Clay W.C., Didebury J.R., Haessler D., Hoffman C.R., Kost T.A., Lambert M.H., Leesnitzer M.A., McCauley P., McGeehan G., Mitchell J., Moyer M., Pabel G., Rocque W., Overton L.K., Schoenen F., Seaton T., Su J.-L., Warner J., Willard D., Becherer J.D.;
- RA "Cloning of a disintegrin metalloproteinase that processes precursor tumour-necrosis factor-alpha."; Nature 385:733-736(1997).
- RL [22]
- RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).
- RX MEDLINE=89159409; PubMed=2922050; DOI=10.1038/338225a0;
- RA Jones E.Y., Stuart D.I., Walker N.P.;
- RA "Structure of tumour necrosis factor."; Nature 338:225-228(1989).
- RL [23]
- RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).


```

RX MEDLINE=91193276; PubMed=1964681;
RA Jones E.Y., Stuart D.I., Walker N.P.;

Query Match          95.7%; Score 779; DB 1; Length 233;
Best Local Similarity 96.2%; Pred. No. 2.5e-70;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 77 VRSSRTPSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136
QY 61 QVLFSGQGPCSTHVLTHTRISIAVSQTPVNLLSAIRSPCQRETPGEAANPWYEPYIL 120
Db 137 QVLFSGQGPCSTHVLTHTRISIAVSQTPVNLLSAIRSPCQRETPGEAANPWYEPYIL 196
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 197 GGVFQLEKGRDLSAEINRPDYLDFAESGGVYFGIIAL 233

RESULT 2
Q5STB3 HUMAN
ID Q5STB3 HUMAN PRELIMINARY; PRT; 233 AA.
AC Q5STB3;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
DE Tumor necrosis factor (TNF superfamily, member 2).
DE Name=TNF;
DE ORFNames=DAQB-87N14.5-001, DASS-280D8.2-001, XXbac-BCX270M2.1-001,
GN XXbac-BFG296P20.12-001;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OC NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Tracey A.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL662847; CAI17678.1; -; Genomic DNA.
DR EMBL; AL929587; CAI18649.1; -; Genomic DNA.
DR EMBL; AL662801; CAI18292.1; -; Genomic DNA.
DR EMBL; BX248519; CAI1940.1; -; Genomic DNA.
DR SMR; Q5STB3; 82-233.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF_alpha.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF 1; 1.
DR PROSITE; PS50049; TNF 2; 1.
DR SEQUENCE 233 AA; 25644 MW; 3DF90F96C9031FFE CRC64;

Query Match          95.7%; Score 779; DB 2; Length 233;
Best Local Similarity 96.2%; Pred. No. 2.5e-70;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 77 VRSSRTPSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136
QY 61 QVLFSGQGPCSTHVLTHTRISIAVSQTPVNLLSAIRSPCQRETPGEAANPWYEPYIL 120
Db 137 QVLFSGQGPCSTHVLTHTRISIAVSQTPVNLLSAIRSPCQRETPGEAANPWYEPYIL 196
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 197 GGVFQLEKGRDLSAEINRPDYLDFAESGGVYFGIIAL 233

RESULT 3
TNFA_PAPSP
ID TNFA_PAPSP STANDARD; PRT; 233 AA.
AC P33620;
DT 01-FEB-1994 (Rel. 28, Created)
DT 01-FEB-1994 (Rel. 28, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
DE Name=TNF; Synonyms=TNFA, TNFSP2;
DE P33620;
OS Papio sp. (Baboon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopitheidae; Papio.
OC NCBI_TaxID=61183;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Sanjanwala M., Edwards A.;
RL Submitted (SEP-1991) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.

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the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.

EMBL; X62141; CAA44068.1; -; Genomic DNA.
PIR; S22052; S22052.
HSSP; P01375; 1A8M.
SMR; P33620; 82-233.
InterPro; IPR006053; TNF abc.
InterPro; IPR002959; TNF_alpha.
InterPro; IPR006052; TNF_family.
InterPro; IPR003636; TNF_subf.
PANTHER; PTHR11471.SF4; TNF_alpha; 1.
Pfam; PF00229; TNF; 1.
PRINTS; PR01234; TNECROSISFCT.
PRINTS; PR01235; TNFALPHA.
ProDom; PD002012; TNF_subf; 1.
SMART; SM00207; TNF; 1.
PROSITE; PS00251; TNF 1; 1.
PROSITE; PS50049; TNF 2; 1.
Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
Tumor necrosis factor, membrane form.
Tumor necrosis factor, soluble form.
Signal-anchor (Potential).
Signal-anchor for type II membrane
protein (Potential).
Extracellular (Potential).
Cleavage (by ADAM17) (By similarity).
Phosphoserine (by CK1) (By similarity).
By similarity.

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SQ SEQUENCE 233 AA; 25557 MW; 455360B48DC74173 CRC64;
Query Match 94.8%; Score 772; DB 1; Length 233;
Best Local Similarity 95.5%; Pred. No. 1.3e-69;
Matches 150; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 77 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 136

QY 61 QVLFSGQGCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPGAEANPWYEPIYL 120
DB 137 QVLFSGQGCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPGAEANPWYEPIYL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 197 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 233

RESULT 4
TNFA_PANTR
ID TNFA_PANTR STANDARD; PRT; 232 AA.
AC Q8HZD9;
DT 10-OCT-2003 (Rel. 42, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Pan troglodytes (Chimpanzee).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Pan.
NCBI_TaxID=9598;
RX MEDLINE=22381002; PubMed=12493009;
RX DOI=10.1034/j.1600-065X.2002.19008.x;
RA Kulski J.K., Shiina T., Anzai T., Kohara S., Inoko H.;
RT "Comparative genomic analysis of the MHC: the evolution of class I
RT duplication blocks, diversity and complexity from shark to man.";
RL Immunol. Rev. 190:95-122(2002).
RN [1]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX MEDLINE=22709134; PubMed=12799463; DOI=10.1073/pnas.1230533100;
RA Anzai T., Shiina T., Kimura N., Yanagita K., Kohara S., Shigenari A.,
RA Yamagata T., Kulski J.K., Naruse T.K., Fujimori Y., Fukuzumi Y.,
RA Yamazaki M., Tashiro H., Iwamoto C., Umehara Y., Inanishi T.,
RA Meyer A., Ikeo K., Gojobori T., Bahram S., Inoko H.;
RT "Comparative sequencing of human and chimpanzee MHC class I regions
RT unveils insertions/deletions as the major path to genomic
RT divergence.";
RL Proc. Natl. Acad. Sci. U.S.A. 100:7708-7713(2003).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 33-186.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RT specific characteristics.";
RL Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFRK1. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation (By similarity).
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
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CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AB054536; BAB3882.1; -; Genomic DNA.
CC EMBL; BA000041; BAC78157.1; -; Genomic DNA.
CC EMBL; AY091964; AAM76582.1; -; Genomic DNA.
CC HSP; P01375; 4TSV.
CC SMR; Q8HZD9; 81-232.
CC InterPro; IPR006053; TNF abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNECROSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD02012; TNF_subf; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS00049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 232
FT Tumor necrosis factor, membrane form (By
FT similarity).
FT CHAIN 77 232
FT Tumor necrosis factor, soluble form (By
FT similarity).
FT TOPO_DOM 1 34
FT TRANSMEM 35 57
FT Cytoplasmic (Potential).
FT Signal-anchor for type II membrane
FT protein (By similarity).
FT TOPO_DOM 58 232
FT SITE 76 77
FT Extracellular (Potential).
FT MOD_RES 2 2
FT Phosphoserine (by CK1) (By similarity).
FT DISULFID 144 176
FT BY_SIMILARITY 77 77
FT CONFLICT 77 77
FT G -> VR (in Ref. 3).
SQ SEQUENCE 232 AA; 25446 MW; E4D71B19C6AE0D03 CRC64;
Query Match 94.6%; Score 770; DB 1; Length 232;
Best Local Similarity 96.1%; Pred. No. 2e-69;
Matches 149; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 3 SSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYSQV 62
DB 78 SSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYSQV 137

QY 63 LFSGQGCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPGAEANPWYEPIYLG 122
DB 138 LFSGQGCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPGAEANPWYEPIYLG 197

QY 123 VFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 198 VFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 232

RESULT 5
TNFA_MACMU
ID TNFA_MACMU STANDARD; PRT; 233 AA.
AC P48094; Q8TM21; Q8HZD6;
DT 01-FEB-1996 (Rel. 33, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
RN
RP NUCLEOTIDE SEQUENCE [MRNA]
RX MEDLINE=96003435; PubMed=7561102;
RA Villinger F.J., Brar S.S., Wayne A.E., Chikkala N., Ansari A.A.;
RT "Comparative sequence analysis of cytokine genes from human and
RT nonhuman primates.";
RL J. Immunol. 155:3946-3954(1995).
RN
RN NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX PubMed=15269276; DOI=10.1093/molbev/msh216;
RA Kuleski J.K., Anzai T., Shiina T., Inoko H.;
RT "Rhesus macaque class I duplicon structures, organization, and
RT evolution within the alpha block of the major histocompatibility
RT complex.";
RL Mol. Biol. Evol. 21:2079-2091(2004).
RN
RN NUCLEOTIDE SEQUENCE [GENOMIC DNA] OF 33-187.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RT specific characteristics.";
RL Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
CC
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia, under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC
CC -!- SUBUNIT: Homotrimer (By similarity).
CC
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; U19850; AAA86712.1; -; mRNA.
CC EMBL; AB128049; BAD69724.1; -; Genomic DNA.
CC EMBL; AV091967; AAM76585.1; -; Genomic DNA.
CC HSSP; P01375; 4TSV
CC SMR; P48094; 82-233.
CC InterPro; IPR006053; TNF_abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC PANTHER; PTHR11471.SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNFCROSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD002012; TNF_subf; 1.
CC SMART; SM00207; TNF; 1.
CC PROSITE; PS00251; TNF; 1; 1.
CC PROSITE; PSS0049; TNF; 2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233 Tumor necrosis factor, membrane form.
FT CHAIN 77 233 Tumor necrosis factor, soluble form.
FT CHAIN 1 35 Cytoplasmic (Potential).
FT TRANSEM 36 Signal-anchor for type II membrane
FT protein (Potential).
FT TOPO_DOM 57 233 Extracellular (Potential).
FT SITE_ 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT

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FT DISULFID 145 177 By similarity.
SQ SEQUENCE 233 AA; 25630 MW; 9F6F85050595FD59 CRC64;

Query Match          93.5%; Score 761; DB 1; Length 233;
Best Local Similarity 94.3%; Pred. No. 1.7e-68;
Matches 148; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1 VRSSRTPTSDMPVAHVANPQAEQQLQWLRNANALLANGVELTNQLVVPSEGLYIYS 60
DB 77 VRSSRTPTSDKPAHVANPQAEQQLQWLRNANALLANGVELTNQLVVPSEGLYIYS 136

QY 61 QVLPSGQCPSSTHLLTHTISRIASVYQTPVNLISAIRSPCORETEPGAENAPWYEPYIL 120
DB 137 QVLPSGQCPSSTHLLTHTISRIASVYQTPVNLISAIRSPCORETEPGAENAPWYEPYIL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
DB 197 GGVFQLEKGRDLSAEINLPDYLDFAESGVYFGIIAL 233

RESULT 6
TNFA_MACFA
ID TNFA_MACFA STANDARD; PRT; 233 AA.
AC P79337;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
DE Name=TNF; Synonyms=TNFA, TNFSF2;
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9541;
RN [1]
RN NUCLEOTIDE SEQUENCE [MRNA].
RP TISSUE=Lymphocyte;
RA Tatum M.;
RT "Molecular cloning and expression of cynomolgus monkey TNF-alpha.";
RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia, under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC
CC -!- SUBUNIT: Homotrimer (By similarity).
CC
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AB000513; BAA19131.1; -; mRNA.
CC HSSP; P01375; 4TSV.
CC SMR; P79337; 82-233.
CC InterPro; IPR006053; TNF_abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.

```

DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PRO1234; TNECROSISFCT.
 DR PRINTS; PRO1235; TNFALPHA.
 DR ProDom; PD002012; TNF subf; 1.
 DR SMART; SM00207; TNF; 1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS0049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT TOPO_DOM 1 35
 FT TOPO_DOM 36 56
 FT SITE 57 233
 FT MOD_RES 76 77
 FT MOD_RES 2 2
 FT DISULFID 145 177
 SQ SEQUENCE 233 AA; 25558 MW; 6ABF2C3AB132C217 CRC64;
 Query Match 93.1%; Score 758; DB 1; Length 233;
 Best Local Similarity 93.6%; Pred. No. 3.3e-68;
 Matches 147; Conservative 2; Mismatches 8; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELDNQLVVPSEGLYLIYS 60
 Db |||||
 QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLISAIRSPCQRETPEGAENPWEPIYL 120
 Db |||||
 QY 137 QVLFKGQGCPSNHVLLTHTISRIAVSYQTKVNLISAIRSPCQRETPEGAENPWEPIYL 196
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 Db |||||
 QY 197 GGVFQLEKGDRLSABINLPDYLDFAESGVYFGIIAL 233

RESULT 7

TNFA_PAPHU
 ID TNFA_PAPHU STANDARD; PRT; 233 AA.
 AC 077510;
 DT 15-DEC-1998 (Rel. 37, Created)
 DT 15-DEC-1998 (Rel. 37, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Papio hamadryas ursinus (Chacma baboon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopithecoidea; Cercopithecinae; Papio.
 OX NCBI_TaxID=36229;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RX MEDLINE=98147379; PubMed=9488055; DOI=10.1016/S0161-5890(97)00124-7;
 RA Haudek S.B., Redl H., Schleg G., Giroir B.P.;
 RT "Complementary DNA (cDNA) sequence of baboon tumor necrosis factor
 RT alpha.";
 RL Mol. Immunol. 34:1041-1042(1997).

CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
 CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
 CC induce cell death of certain tumor cell lines. It is potent
 CC pyrogen causing fever by direct action or by stimulation of
 CC interleukin 1 secretion and is implicated in the induction of
 CC cachexia. Under certain conditions it can stimulate cell
 CC proliferation and induce cell differentiation.
 CC -!- SUBUNIT: Homotrimer (By similarity).
 CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
 CC extracellular soluble form (By similarity).
 CC -!- PTM: The soluble form derives from the membrane form by
 CC proteolytic processing (By similarity).
 CC -!- PTM: The membrane form, but not the soluble form, is

CC phosphorylated on serine residues. Dephosphorylation of the
 CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
 CC similarity).
 CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
 CC -----
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 CC EMBL; AF019963; AAC31675.1; -; mRNA.
 CC HSSP; P01375; 4TSV.
 CC SMR; O77510; 82-233.
 DR InterPro; IPR006053; TNF_abc.
 DR InterPro; IPR002959; TNF_alpha.
 DR InterPro; IPR006052; TNF family.
 DR InterPro; IPR003636; TNF subf.
 DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PRO1234; TNECROSISFCT.
 DR PRINTS; PRO1235; TNFALPHA.
 DR ProDom; PD002012; TNF subf; 1.
 DR SMART; SM00207; TNF; 1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS0049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT TOPO_DOM 1 35
 FT TOPO_DOM 36 56
 FT SITE 57 233
 FT MOD_RES 76 77
 FT MOD_RES 2 2
 FT DISULFID 145 177
 SQ SEQUENCE 233 AA; 25658 MW; B9403255058D4A03 CRC64;
 Query Match 93.0%; Score 757; DB 1; Length 233;
 Best Local Similarity 93.6%; Pred. No. 4.2e-68;
 Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELDNQLVVPSEGLYLIYS 60
 Db |||||
 QY 77 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELDNQLVVPSEGLYLIYS 136
 QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLISAIRSPCQRETPEGAENPWEPIYL 120
 Db |||||
 QY 137 QVLFKGQGCPSNHVLLTHTISRIAVSYQTKVNLISAIRSPCQRETPEGAENPWEPIYL 196
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 Db |||||
 QY 197 GGVFQLEKGDRLSABINLPDYLDFAESGVYFGIIAL 233

RESULT 8

TNFA_PAPAN
 ID TNFA_PAPAN STANDARD; PRT; 233 AA.
 AC P59695;
 DT 10-OCT-2003 (Rel. 42, Created)
 DT 10-OCT-2003 (Rel. 42, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Papio anubis (Olive baboon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopithecoidea; Cercopithecinae; Papio.
 OX NCBI_TaxID=9555;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=21383618; PubMed=11491535; DOI=10.1007/s002510100322;
 RA Villiger F.J., Bostik P., Mayne A.E., King C.L., Genain C.P.,
 RA Weiss W.R., Ansari A.A.;
 RT "Cloning, sequencing, and homology analysis of nonhuman primate
 Fas/Fas-ligand and co-stimulatory molecules.";
 RL Immunogenetics 53:315-328(2001).
 CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
 CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
 CC induce cell death of certain tumor cell lines. It is potent
 CC pyrogen causing fever by direct action or by stimulation of
 CC interleukin 1 secretion and is implicated in the induction of
 CC cachexia. Under certain conditions it can stimulate cell
 CC proliferation and induce cell differentiation (By similarity).
 CC -!- SUBUNIT: Homotrimer (By similarity).
 CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
 CC extracellular soluble form (By similarity).
 CC -!- PTM: The soluble form derives from the membrane form by
 CC proteolytic processing (By similarity).
 CC -!- PTM: The membrane form, but not the soluble form, is
 CC phosphorylated on serine residues. Dephosphorylation of the
 CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
 CC similarity).
 CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
 CC
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC
 CC EMBL; AY234222; AAO85335.1; -; mRNA.
 DR HSSP; P01375; 4TSV.
 DR SMR; P59695; 82-233.
 DR InterPro; IPR006053; TNF_abc.
 DR InterPro; IPR002959; TNF_alpha.
 DR InterPro; IPR006052; TNF_family.
 DR InterPro; IPR003636; TNF_subf.
 DR PANTHER; PTHR11471.SF4; TNF_alpha; 1.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PR01234; TNECROSISFCT.
 DR PRINTS; PR01235; TNFALPHA.
 DR ProDom; PD002012; TNF_subf; 1.
 DR SMART; SM00207; TNF; 1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS00049; TNF_2; 1.
 DR Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 KW CHAIN 1 233 Tumor necrosis factor, membrane form (By
 FT similarity).
 FT CHAIN 77 233 Tumor necrosis factor, soluble form (By
 FT similarity).
 FT TOPO_DOM 1 34 Cytoplasmic (Potential).
 FT TRANSMEM 35 57 Signal-anchor for type II membrane
 FT protein (By similarity).
 FT TOPO_DOM 58 233 Extracellular (Potential).
 FT SITE_76 77 Cleavage (by ADAM17) (By similarity).
 FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
 FT DISULFID 145 177 By similarity.
 FT .SEQUENCE 233 AA; 25736 MW; 0C477F9EB6CC9909 CRC64;
 Query Match 92.6%; Score 754; DB 1; Length 233;
 Best Local Similarity 93.6%; Pred. No. 8.4e-68;
 Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;
 QY 1 VRSSRTPSPMPVHVAVNPQAEQQLWLNRRANALLANGVELRDNLQVPSGLYLIYS 60
 DB 77 VRSSRTPSPDKPVHVAVNPQAEQQLWLNRRANALLANGVELRDNLQVPSGLYLIYS 136
 QY 61 QVLFSGGCGPSTHLLTHTTSRIASVYQTPVNLISAIRSPCQRETPGAGANPWYEPYIL 120
 DB 137 QVLFKGGCGPSNVHLLTHTTSRIASVYQTPVNLISAIRSPCQRETPGAGAKPWYEPYIL 196
 QY 121 GGVFQLEKPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

Db 197 GGVFQLEKPGDRLSAEINRPDYLDFAESGQVYFGIIAL 233
 RESULT 9
 ID 097543 AOTNA PRELIMINARY; PRT; 149 AA.
 AC 097543;
 DT 01-MAY-1999 (TREMBlrel. 10, Created)
 DT 01-MAY-1999 (TREMBlrel. 10, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE Tumor necrosis factor alpha (Fragment).
 GN Name-TNF-alpha;
 OS Aotus nancyanae (Ma's night monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
 OC Aotinae; Aotus.
 OC NCBI_TaxID=37293;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
 RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
 RA Murillo L.A., Patarroyo M.E.;
 RT "Identification, cloning, and sequencing of different cytokine genes
 in four species of owl monkey.";
 RL Immunogenetics 54:645-653(2002).
 DR EMBL; AF014513; AAD01539.1; -; mRNA.
 DR HSSP; P01375; 4TSV.
 DR SMR; 097543; 1-149.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0003164; F:tumor necrosis factor receptor binding; IEA.
 DR GO; GO:0006955; P:immune response; IEA.
 DR InterPro; IPR006053; TNF_abc.
 DR InterPro; IPR002959; TNF_alpha.
 DR InterPro; IPR006052; TNF_family.
 DR InterPro; IPR003636; TNF_subf.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PR01234; TNECROSISFCT.
 DR PRINTS; PR01235; TNFALPHA.
 DR ProDom; PD002012; TNF_subf; 1.
 DR SMART; SM00207; TNF; 1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS00049; TNF_2; 1.
 FT NON_TER 1
 FT NON_TER 149 149
 SQ SEQUENCE 149 AA; 16466 MW; 3C2A6140778EFA8A CRC64;
 Query Match 91.4%; Score 744; DB 2; Length 149;
 Best Local Similarity 96.0%; Pred. No. 5e-67;
 Matches 143; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
 QY 8 PSDMPVHVAVNPQAEQQLWLNRRANALLANGVELRDNLQVPSGLYLIYSQVLFSGQ 67
 DB 1 PSDKPVHVAVNPQAEQQLWLNRRANALLANGVELRDNLQVPSGLYLIYSQVLFKQG 60
 QY 68 GCPSTHLLTHTTSRIASVYQTPVNLISAIRSPCQRETPGAGANPWYEPYILGGVFPQLE 127
 DB 61 GCPSTHLLTHTTSRIASVYQTPVNLISAIRSPCQRETPGAGAKPWYEPYILGGVFPQLE 120
 QY 128 PGDRLSAEINRPDYLDFAESGQVYFGIIA 156
 DB 121 KGDRLSAEINRPDYLDFAESGQVYFGIIA 149
 RESULT 10
 ID TNFA CANFA STANDARD; PRT; 233 AA.
 AC PS1742; Q28339;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].

GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Canis familiaris (Dog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
 Canis.
 OX NCBI_TaxID=9615;
 RN [1]_TaxID=9615;
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RA Fiers W.;
 RT "Tumour necrosis factor."; (In) Sim E. (eds.);
 RL The natural immune system humoral factors, pp.65-119, IRL Press,
 RL Oxford (1993).
 RN [2]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RA Zucker K., Lu P., Fuller L., Aethana D., Esquenazi V., Miller J.;
 RT "Cloning and expression of the cDNA for canine tumor necrosis factor-
 alpha in E. coli."; (In) Sim E. (eds.);
 RL Lymphokine Res. 13:191-196(1994).
 RN [3]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RA Wagner J.L., Palti Y., DiDario D.D.;
 RT "Genomic map of a portion of the canine MHC class I histocompatibility
 complex."; (In) Sim E. (eds.);
 RL Submitted (SEP-2003) to the EMBL/GenBank/DBJ databases.
 RN [4]
 RP NUCLEOTIDE SEQUENCE [MRNA] OF 74-205.
 RC STRAIN=Beagle; TISSUE=Blood;
 RA Gilmore W.H., Carter S.D., Bennett M., Barnes A., Kelly D.F.;
 RT "Expression of canine TNF, IL-1 and IL-6 mRNAs in peripheral blood
 monocytes and cell lines."; (In) Sim E. (eds.);
 RL Submitted (MAR-1996) to the EMBL/GenBank/DBJ databases.
 CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
 CC TNFRSF1B/TNFR2. It is mainly secreted by macrophages and can
 CC induce cell death of certain tumor cell lines. It is potent
 CC pyrogen causing fever by direct action or by stimulation of
 CC interleukin 1 secretion and is implicated in the induction of
 CC cachexia. Under certain conditions it can stimulate cell
 CC proliferation and induce cell differentiation.
 CC -!- SUBUNIT: Homotrimer (By similarity).
 CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
 CC extracellular soluble form (By similarity).
 CC -!- PTM: The soluble form derives from the membrane form by
 CC proteolytic processing (By similarity).
 CC -!- PTM: The membrane form, but not the soluble form, is
 CC phosphorylated on serine residues. Dephosphorylation of the
 CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
 CC similarity).
 CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.

DR PROSITE: PS00251; TNF_1; 1.
 DR PROSITE: PS00049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT CHAIN 77 233
 FT CHAIN 1 35
 FT TOPO_DOM 1 35
 FT TRANSMEM 36 56
 FT TOPO_DOM 57 233
 FT SITE 76 77
 FT MOD_RES 2 2
 FT DISULFID 145 177
 FT CONFLICT 59 60
 FT CONFLICT 66 66
 FT CONFLICT 74 74
 FT CONFLICT 111 111
 FT CONFLICT 116 116
 FT CONFLICT 134 135
 SQ SEQUENCE 233 AA; 25447 MW; 7B2588FBC8B25340 CRC64;
 Query Match 90.7%; Score 738; DB 1; Length 233;
 Best Local Similarity 89.8%; Pred. No. 3.5e-66;
 Matches 141; Conservative 7; Mismatches 9; Indels 0; Gaps 0;
 QY 1 VRSSRTPTSDMPVAVHVNPAEQQLWLNRRANALLANGVELRDNLVPSGGLYLYS 60
 DB 77 VRSSRTPTSDMPVAVHVNPAEQQLWLNRRANALLANGVELRDNLVPSGGLYLYS 136
 QY 61 QVLFSGQCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPQRETPEGAANPWYEPYIL 120
 DB 137 QVLFSGQCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPQRETPEGAANPWYEPYIL 196
 QY 121 GGVFQLEKGRDLSAEINLPYLDPAESQGVYFGIIL 157
 DB 197 GGVFQLEKGRDLSAEINLPYLDPAESQGVYFGIIL 233
 RESULT 11
 ID TNFA_FELCA STANDARD; PRT; 233 AA.
 AC P19101; Q8HYMO;
 DT 01-NOV-1990 (Rel. 16, Created)
 DT 10-OCT-2003 (Rel. 42, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 OS Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Felis silvestris catus (Cat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Felidae;
 OC Felinae; Felis.
 OX NCBI_TaxID=9685;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RC TISSUE=Blood;
 RX MEDLINE=91016860; PubMed=2216740;
 RA McGraw R.A., Coffee B.W., Otto C.M., Drews R.T., Rawlings C.A.;
 RT "Gene sequence of feline tumor necrosis factor alpha.";
 RL Nucleic Acids Res. 18:5563-5563(1990).
 RN [2]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RC TISSUE=Bone marrow;
 RA Daniel S.L., Brenner C.A., Legendre A.M., Solomon A., Rouse B.T.;
 RT "Feline cytokines TNF alpha and IL-1 beta: PCR cloning and sequencing
 RT of cDNA.";
 RL Anal. Biochem. 199:117-121(1992).
 RN [3]
 RP NUCLEOTIDE SEQUENCE OF 95-185.
 RA Susott E.E., Kollo W.A., Venta P.J., Ewart S.L.;
 RT "Characterization of 8 feline type I markers.";
 RL Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.
 CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and


```
DR PROSITE, PS50049; TNF_2; 1.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233 Tumor necrosis factor, membrane form (By
FT FT similarity).
FT CHAIN 77 233 Tumor necrosis factor, soluble form (By
FT FT similarity).
FT TOPO_DOM 1 32 Cytoplasmic (Potential).
FT TRANSMEM 33 55 Signal-anchor for type II membrane
FT FT protein (By similarity).
FT TOPO_DOM 56 233 Extracellular (Potential).
FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT DISULFID 145 177 By similarity.
SQ SEQUENCE 233 AA; 25578 MW; 197FB066F744FCAD CRC64;

Query Match 87.0%; Score 708; DB 1; Length 233;
Best Local Similarity 87.3%; Pred. No. 3.8e-63;
Matches 137; Conservative 7; Mismatches 13; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
DB 77 VRSSRIPSDKPVAVHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 136

QY 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYL 120
DB 137 QVLFKGQGPCSTFTLLTHTISRIAVSYQAKVNLLSAIRSPCORETPRGAKTNPWEPIYL 196

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIL 157
DB 197 GGVFQLEKGRLSABISPPDLDLAESGVYFGIIL 233

RESULT 13
O97538 AOTVO PRELIMINARY; PRT; 149 AA.
AC O97538;
DT 01-MAY-1999 (TrEMBLrel. 10, Created)
DT 01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (Fragment).
GN Name=TNF-alpha;
OS Aotus vociferans (Spix's owl monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Actinae; Aotus.
OX NCBI_TaxID=57176;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarro M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey."
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF014508; RAD01534.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; O97538; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF subf; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 86.2%; Score 702; DB 2; Length 149;
Best Local Similarity 89.9%; Pred. No. 8.8e-63;
Matches 134; Conservative 5; Mismatches 10; Indels 0; Gaps 0;

QY 8 PSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 67
DB 1 PSDKPVAVHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60

QY 68 GCPSTHLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYLGVFQLE 127
DB 61 GCPSTFMLLTHTISRIAVSYQAKVNLLSAIRSPCORETPRGAKTNPWEPIYLGVFQLE 120

RESULT 14
Q9TTG8 AOTNI PRELIMINARY; PRT; 149 AA.
AC Q9TTG8;
DT 01-MAY-2000 (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (Fragment).
GN Name=TNF-alpha;
OS Aotus nigriceps (Black-headed owl monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Actinae; Aotus.
OX NCBI_TaxID=57175;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarro M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey."
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF097328; AAF21303.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; Q9TTG8; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF subf; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 86.2%; Score 702; DB 2; Length 149;
Best Local Similarity 89.9%; Pred. No. 8.8e-63;
Matches 134; Conservative 5; Mismatches 10; Indels 0; Gaps 0;

QY 8 PSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 67
DB 1 PSDKPVAVHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60

QY 68 GCPSTHLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYLGVFQLE 127
DB 61 GCPSTFMLLTHTISRIAVSYQAKVNLLSAIRSPCORETPRGAKTNPWEPIYLGVFQLE 120
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QY 128 PGDRLSAEINRPDYLDFAESGQVYFGIIA 156
Db 121 KGRDLSAEINLPDYLDAESGQVYFGIIA 149

RESULT 15
TNFA_HORSE
ID TNFA_HORSE STANDARD; PRT; 234 AA.
AC P29553; Q9TJ3.
DT 01-APR-1993 (Rel. 25, Created)
DT 01-APR-1993 (Rel. 25, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) [Contains: Tumor
DE ligand superfamily member 2] (TNF-a) (Cachectin)
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form).
GN Name-TNF; Synonyms-TNFA, TNFSF2;
OS Equus caballus (Horse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
OX NCBI_TaxID=9796;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=92084125; PubMed=1748301; DOI=10.1016/0378-1119(91)90333-7;
RA Su X., Morris D.D., McGraw R.A.;
RT "Cloning and characterization of gene TNF alpha encoding equine tumor
RT necrosis factor alpha.";
RL Gene 107:319-321(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=Thoroughbred; TISSUE=Artery;
RA Ishida N., Sato F., Hasegawa T.;
RT "Molecular cloning of equine tumor necrosis factor-alpha mRNA.";
RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; M64087; AAA30959.1; -; Genomic_DNA.
CC DR EMBL; AB035735; BAA88349.1; -; mRNA.
CC PIR; JQ1344; JQ1344.
CC DR HSSP; P01375; 1A8M.
CC SMR; P29553; 83-234.
CC DR InterPro; IPR006053; TNF_abs.
CC DR InterPro; IPR002959; TNF_alpha.
CC DR InterPro; IPR006052; TNF_family.
CC DR InterPro; IPR003636; TNF_subf.
CC DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
CC DR Pfam; PF00229; TNF; 1.
CC DR PRINTS; PR01234; TNECROSISFCT.
CC DR PRINTS; PR01235; TNFALPHA.
CC DR ProDom; PD002012; TNF_subf; 1.
CC DR SMART; SM00207; TNF; 1.
CC DR PROSITE; PS00251; TNF_1; 1.

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DR PROSITE; PS50049; TNF_2; 1.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 234 Tumor necrosis factor, membrane form.
FT CHAIN 78 234 Tumor necrosis factor, soluble form.
FT TOPO_DOM 1 35 Cytoplasmic (Potential).
FT TRANSMEM 36 56 Signal-anchor for type II membrane
FT protein (Potential).
FT TOPO_DOM 57 234 Extracellular (Potential).
FT SITE 77 78 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT DISULFID 146 178 By similarity.
FT CONFLICT 177 179 PCH->LAN (in Ref. 2).
SQ SEQUENCE 234 AA; 25469 MW; E79ACE91143DF373 CRC64;

Query Match 85.6%; Score 697; DB 1; Length 234;
Best Local Similarity 85.4%; Pred. No. 5e-62;
Matches 134; Conservative 11; Mismatches 12; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 78 LRSSRTPSDKPVAHVANPQAEGLQWLSGRANALLANGVKLTQNLVPLDGLYIYS 137

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLISAIRSPCORETPEGAEANPWYEPYIL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 138 QVLFKGQGCPSHTVLLTHTTISRLAVSYPSKVNLLSAIKSPCHTESPEQAEAKPWYEPYIL 197

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 198 GGVFQLEKGDQLSAEINQPNYLDFAESGQVYFGIIAL 234

Search completed: May 5, 2006, 11:26:01
Job time : 54.5 secs

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GenCore version 5.1.7
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 11:22:28 ; Search time 15.25 seconds
(without alignments)

851.153 Million cell updates/sec

Title: US-10-668-178-3

Perfect score: 814

Sequence: 1 VRSSRTSPDMPVAHVANP.....RPDYLDFRESGVYFGIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:*

1: /cgn2_6/ptodata/1/iaa/5 COMB.pcp:*

2: /cgn2_6/ptodata/1/iaa/6 COMB.pcp:*

3: /cgn2_6/ptodata/1/iaa/H COMB.pcp:*

4: /cgn2_6/ptodata/1/iaa/PCRUS COMB.pcp:*

5: /cgn2_6/ptodata/1/iaa/RE COMB.pcp:*

6: /cgn2_6/ptodata/1/iaa/backfiles1.pcp:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	779	95.7	157	1	US-07-794-400-1
2	779	95.7	157	1	US-08-041-648-2
3	779	95.7	157	1	US-08-107-235-1
4	779	95.7	157	1	US-08-217-529-2
5	779	95.7	157	1	US-08-318-193-86
6	779	95.7	157	1	US-08-397-470-1
7	779	95.7	157	1	US-08-192-102-1
8	779	95.7	157	1	US-08-324-799-1
9	779	95.7	157	1	US-08-538-875-1
10	779	95.7	157	1	US-08-394-600B-17
11	779	95.7	157	1	US-08-500-860A-35
12	779	95.7	157	1	US-08-192-861A-1
13	779	95.7	157	1	US-08-600-783-5
14	779	95.7	157	2	US-08-584-031-13
15	779	95.7	157	2	US-08-714-960B-1
16	779	95.7	157	2	US-09-133-119-1
17	779	95.7	157	2	US-08-192-093A-1
18	779	95.7	157	2	US-09-598-784-1
19	779	95.7	157	2	US-09-496-118B-7
20	779	95.7	157	2	US-08-395-456C-17
21	779	95.7	157	2	US-08-487-453A-17
22	779	95.7	157	2	US-09-582-450-13
23	779	95.7	157	2	US-09-934-465-13
24	779	95.7	157	2	US-09-756-301B-1
25	779	95.7	157	2	US-09-756-398B-1
26	779	95.7	157	4	PCT-US92-02190-1
27	779	95.7	157	4	PCT-US93-02475-1

28 779 95.7 157 4 PCT-US95-02513-17
29 779 95.7 157 6 5180811-1
30 779 95.7 158 2 US-09-645-415A-4
31 779 95.7 177 1 US-08-394-600B-21
32 779 95.7 177 2 US-08-395-456C-21
33 779 95.7 177 2 US-08-487-453A-21
34 779 95.7 177 4 PCT-US95-02513-21
35 779 95.7 180 2 US-09-645-415A-8
36 779 95.7 193 1 US-08-889-909A-3
37 779 95.7 193 2 US-09-156-163A-3
38 779 95.7 193 2 US-09-982-308B-3
39 779 95.7 233 1 US-08-323-445A-10
40 779 95.7 233 1 US-08-515-903A-10
41 779 95.7 233 1 US-08-912-227-3
42 779 95.7 233 1 US-08-230-428B-2
43 779 95.7 233 2 US-08-883-086-6
44 779 95.7 233 2 US-08-880-342-37
45 779 95.7 233 2 US-09-589-287B-3

ALIGNMENTS

RESULT 1
US-07-794-400-1
; Sequence 1, Application US/07794400
; Patent No. 5422104
; GENERAL INFORMATION:
; APPLICANT: Fiers, W.
; APPLICANT: Tavernier, J.
; APPLICANT: Van Ostade, X.
; TITLE OF INVENTION: TNF-Mutains
; NUMBER OF SEQUENCES: 24
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM: disk
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/794,400
; FILING DATE: 19911120
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: Protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
; US-07-794-400-1
Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

1	VRSSRTSDMPVAHVANPQAEQQLWLNRRNALLANGVELRDQNLVVPSEGLYIS	60
Qy		
1	VRSSRTSDMPVAHVANPQAEQQLWLNRRNALLANGVELRDQNLVVPSEGLYIS	60
Db		
61	QVLFSGQGCPSPTHLLTHTSIRIAVSQTPVNLLSAIRSPCQRETPEGAEANPWPEIYL	120
Qy		
61	QVLFSGQGCPSPTHLLTHTSIRIAVSQTPVNLLSAIRSPCQRETPEGAEANPWPEIYL	120
Db		
121	GVGFQLEPGDRLSAEINRPDYLDFAESGVQVFGIIAL	157
Qy		
121	GVGFQLEPGDRLSAEINRPDYLDFAESGVQVFGIIAL	157
Db		

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RESULT 2
US-08-041-648-2
; Sequence 2, Application US/08041648
; Patent No. 5486463
; GENERAL INFORMATION:
; APPLICANT: Lesslauer, Werner
; APPLICANT: Letscher, Hansruedi
; APPLICANT: St ber, Dietrich
; TITLE OF INVENTION: TNF-MUTEINS
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: U.S.A.
; ZIP: 07110-1199

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	Query Match	95.7%	Score 779;	DB 1;	Length 157;
	Best Local Similarity	96.2%;	Pred. No. 9.5e-74;		
	Matches 151;	Conservative 1;	Mismatches 5;	Indels 0;	Gaps 0;
QY	1	VRSSRTPDMPVAHVVANPQASGQQLWLNRRNALLANGVELRDNQLVVPSEGLYLIYS	60		
Db	1	VRSSRTPDMPVAHVVANPQASGQQLWLNRRNALLANGVELRDNQLVVPSEGLYLIYS	60		
QY	61	QVLFSGGCPSTHVLVTHTISRIVAVSYQTPVNLLSAIRSCQRETPGSAANPWYEFIYL	120		
Db	61	QVLFKGCGCPSTHVLVTHTISRIVAVSYQTKVNLLSAIRSCQRETPGSAKPWYEFIYL	120		
QY	121	GGVQFLPQDRLSAEINRPDYLDFASSGGVYFGIIAL	157		

121 GGVFQLEKGDRLSAEINRPDYLDFAESGVVFGIALL 157
Db

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RESULT 3
US-08-107-235-1
; Sequence 1, Application US/08107235
; Patent No. 5587457
; GENERAL INFORMATION:
; APPLICANT: Rathjen, Deborah A
; APPLICANT: Ferrante, Antonio
; APPLICANT: Widmer, Fred
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Allegretti & Witcoff, Ltd.
; STREET: 10 S. Wacker Dr.
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
;

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	Query Match	95.7%	Score 779;	DB 1;	Length 157;
	Best Local Similarity	96.2%;	Pred. No. 9.5e-74;		
	Matches 151; Conservative	1;	Mismatches 5;	Indels 0;	Gaps 0;
Qy	1 VRSSRTPSDMPVAVVWVPAQEGQLWNRRANALLANGVELRDNQLVVPSEGLYLIYS	60			
Dd	1 VRSSRTPSDKPVAVVWVPAQEGQLWNRRANALLANGVELRDNQLVVPSEGLYLIYS	60			
Qy	61 QVLFSGGGCPSTHVLTHTISRIVASYQTVPVNLLSAIRSPCQRETPGAEANPMWEPIYL	120			
Dd	61 QVLFKGGGCPSTHVLTHTISRIVASYQTVPVNLLSAIKPCQRETPGAEAKPMWEPIYL	120			
Qy	121 GGVFQLEPGDRLSAENRPDYLDPAESGGVYFGIIAL	157			
Dd	121 GGVFOLEKGRDLSAENRPDYLDPAESGGVYFGIIAL	157			

RESULT 4
US-08-217-529-2
; Sequence 2, Application US/08217529
; Patent No. 5597899
; GENERAL INFORMATION:

APPLICANT: Banner, David
APPLICANT: Lesslauer, Werner
APPLICANT: Lotzcher, Hanserudi
APPLICANT: Stuber, Dietrich
TITLE OF INVENTION: Tumor Necrosis Factor Muteins
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: U.S.
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/217,529
FILING DATE: 24-MAR-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 93810224.1
FILING DATE: 29-MAR-1993
ATTORNEY/AGENT INFORMATION:
NAME: Roseman, Catherine R
REGISTRATION NUMBER: 34240
REFERENCE/DOCKET NUMBER: 4105/155
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-3500
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-217-529-2

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60
DB 1 VRSSRTPSDKPKVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60

QY 61 QVLFSGGCGPSTHLLTHTSIRIAVSQTPVNLLSAIRSPCQRETPEGAEANPWYEPYIL 120
DB 61 QVLFKGGCGPSTHLLTHTSIRIAVSQTKVNLLSAISKPCQRETPEGAEAKPWYEPYIL 120

QY 121 GGVFQLEKGRDLASAEINRPDYLDFAESGGVYFGIALL 157
DB 121 GGVFQLEKGRDLASAEINRPDYLDFAESGGVYFGIALL 157

RESULT 5
US-08-318-193-86
Sequence 86, Application US/08318193
Patent No. 5641663
GENERAL INFORMATION:
APPLICANT: GARVIN, Robert T.
APPLICANT: MALEK, Lawrence T.
TITLE OF INVENTION: AN EXPRESSION SYSTEM FOR THE SECRETION
OF BIOACTIVE HUMAN GRANULOCYTE MACROPHAGE COLONY
STIMULATING FACTOR (GM-CSF) AND OTHER HETEROLOGOUS
PROTEINS FROM STREPTOMYCES
TITLE OF INVENTION: 91
NUMBER OF SEQUENCES: 91
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500
CITY: Alexandria

STATE: Virginia
COUNTRY: USA
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/318,193
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,314
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 18740/116 CACO
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-9300
TELEFAX: (703) 883-4109
TELEX: 899149
INFORMATION FOR SEQ ID NO: 86:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-318-193-86

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60
DB 1 VRSSRTPSDKPKVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60

QY 61 QVLFSGGCGPSTHLLTHTSIRIAVSQTPVNLLSAIRSPCQRETPEGAEANPWYEPYIL 120
DB 61 QVLFKGGCGPSTHLLTHTSIRIAVSQTKVNLLSAISKPCQRETPEGAEAKPWYEPYIL 120

QY 121 GGVFQLEKGRDLASAEINRPDYLDFAESGGVYFGIALL 157
DB 121 GGVFQLEKGRDLASAEINRPDYLDFAESGGVYFGIALL 157

RESULT 6
US-08-397-470-1
Sequence 1, Application US/08397470
Patent No. 5652353
GENERAL INFORMATION:
APPLICANT: Fiers, W.
APPLICANT: Tavernier, J.
APPLICANT: Van Oostade, X.
TITLE OF INVENTION: TNF-Mutins
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/397,470

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; FILING DATE: 01-MAR-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/794,400
; FILING DATE: 20-NOV-1991
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
;
US-08-397-470-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPOAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPVAHVANPOAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
Db 61 QVLFKGQGCPSHTVLLTHTISRIASVYQTKVNLLSAISKSPCQRETPEGAENPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 7
US-08-192-102-1
; Sequence 1, Application US/08192102
; Patent No. 5656272
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilecek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND ASSAYS EMPLOYING
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/192,102
; FILING DATE: 04-FEB-1994
; CLASSIFICATION: 424
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/192,093
; FILING DATE: 04-FEB-1994
; APPLICATION NUMBER: US 08/013,413
; FILING DATE: 02-FEB-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/010,406
; FILING DATE: 29-JAN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/943,852
; FILING DATE: 11-SEP-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,606
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/670,827
; FILING DATE: 18-MAR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Brook, David E.
; REGISTRATION NUMBER: 22,592
; REFERENCE/DOCKET NUMBER: NY093-01M3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 861-6240
; TELEFAX: (617) 861-9540
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
;
US-08-192-102-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPOAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPVAHVANPOAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
Db 61 QVLFKGQGCPSHTVLLTHTISRIASVYQTKVNLLSAISKSPCQRETPEGAENPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 8
US-08-324-799-1
; Sequence 1, Application US/08324799
; Patent No. 5698195
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilecek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND PEPTIDES
; TITLE OF INVENTION: OF HUMAN TUMOR NECROSIS FACTOR
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/324,799
FILING DATE: 18-OCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,093
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,102
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,861
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NYU93-01M4
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
TELEFAX: (617) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-324-799-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSPDMPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDMPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Qy 61 QVLFSGGCGPSTHLLTHTTSRIASVYQTPVNLISAIRSPCQRETPGAEANPWYPIYL 120
Db 61 QVLFKGCGPSTHLLTHTTSRIASVYQTPVNLISAIKSPCQRETPGAEAKPWYPIYL 120

Qy 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 9
US-08-538-875-1
Sequence 1, Application US/08538875
Patent No. 5773582
GENERAL INFORMATION:
APPLICANT: Shin, Hang-Cheol
APPLICANT: Shin, Nam-Kyu
APPLICANT: Lee, Inkyung
APPLICANT: Kang, Sungzong
TITLE OF INVENTION: TUMOR NECROSIS FACTOR MUTEINS
NUMBER OF SEQUENCES: 73
CORRESPONDENCE ADDRESS:

ADDRESSEE: Shin, Hang-Cheol
STREET: Jukong Gocheung Apt. 1014-806, Haan-dong
CITY: Kwangmyung-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 423-060
ADDRESSEE: Shin, Nam-Kyu
STREET: #181-404 Sadang-4-dong, Dongjak-ku
CITY: Seoul
STATE: Republic of Korea
ZIP: 156-094
ADDRESSEE: Lee, Inkyung
STREET: #11/2, #302-39 Juan-4-dong, Nam-ku
CITY: Incheon
STATE: Republic of Korea
ZIP: 402-204
ADDRESSEE: Kang, Sungzong
STREET: #84-4 Daeshin-dong, Seodaemun-ku
CITY: Seoul
STATE: Republic of Korea
ZIP: 120-160
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette 3.5inch 2.0Mb storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/538,875
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/193,336
FILING DATE:
APPLICATION NUMBER: KR 93-1751
FILING DATE: 9-FEB-1993
ATTORNEY/AGENT INFORMATION:
NAME:
REGISTRATION NUMBER:
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE:
TELEFAX:
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-538-875-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSPDMPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDMPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Qy 61 QVLFSGGCGPSTHLLTHTTSRIASVYQTPVNLISAIRSPCQRETPGAEANPWYPIYL 120
Db 61 QVLFKGCGPSTHLLTHTTSRIASVYQTPVNLISAIKSPCQRETPGAEAKPWYPIYL 120

Qy 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 10
US-08-394-600B-17

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; Sequence 17, Application US/08394600B
; Patent No. 5843693
; GENERAL INFORMATION:
; APPLICANT: Halenbeck, Robert F.
; APPLICANT: Jewell, David A.
; APPLICANT: Koths, Kirston E.
; APPLICANT: Kriegler, Michael
; APPLICANT: Perez, Carl
; TITLE OF INVENTION: Compositions for the Inhibition of
; TITLE OF INVENTION: Protein Hormone Formation and Uses Thereof
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street; 34th Floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/394,600B
; FILING DATE: 02/27/95
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Donald J. Pochopien
; REGISTRATION NUMBER: 32,167
; REFERENCE/DOCKET NUMBER: 820.005/11850US05
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX:
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-394-600B-17

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 1 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Qy 61 QVLFSGQGCPSFTHVLLTHTISRIAVSYQTVPVNLSSAIRSPCQRETPEGAEANPWYEPYVL 120
Db 61 QVLFKGQGCPSFTHVLLTHTISRIAVSYQTVPVNLSSAIRSPCQRETPEGAEANPWYEPYVL 120
Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 11
US-08-500-860A-35
; Sequence 35, Application US/08500860A
; Patent No. 5891679
; GENERAL INFORMATION:
; APPLICANT: LUCAS, RUDOLPH
; APPLICANT: DE BAETSELIER, PATRICK
; APPLICANT: FRANSEN, LUCIE
; APPLICANT: SABLON, ERWIN
; TITLE OF INVENTION: TNF-MUTEINS, A PROCESS FOR PREPARING THEM AND
; TITLE OF INVENTION: THEIR USE AS ACTIVE SUBSTANCES IN PHARMACEUTICAL COMPOSITIONS
; NUMBER OF SEQUENCES: 36
; CORRESPONDENCE ADDRESS:
```

```
; ADDRESSEE: NIXON & VANDERHVE P.C.
; STREET: 1100 NORTH GLEBE ROAD
; CITY: ARLINGTON
; STATE: VIRGINIA
; COUNTRY: U.S.A.
; ZIP: 22201-4714
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/500,860A
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: BYRNE, THOMAS E.
; REGISTRATION NUMBER: 32,205
; REFERENCE/DOCKET NUMBER: 1487-8
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703)816-4000
; TELEFAX: (703)816-4100
; TELEX: 200797 NIXN UR
; INFORMATION FOR SEQ ID NO: 35:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-500-860A-35

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 1 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Qy 61 QVLFSGQGCPSFTHVLLTHTISRIAVSYQTVPVNLSSAIRSPCQRETPEGAEANPWYEPYVL 120
Db 61 QVLFKGQGCPSFTHVLLTHTISRIAVSYQTVPVNLSSAIRSPCQRETPEGAEANPWYEPYVL 120
Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 12
US-08-192-861A-1
; Sequence 1, Application US/08192861A
; Patent No. 5919452
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Valcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: METHODS OF TREATING TNF-MEDIATED DISEASE USING
; TITLE OF INVENTION: CHIMERIC ANTI-TNF ANTIBODIES (As Amended)
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/192,861A
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NYU93-01M2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (781) 861-6240
TELEFAX: (781) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-192-861A-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAVHVNPAQEGQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDPKVAVHVNPAQEGQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTHTSIRAVSYQTPVNLISAIRSPCQRETPGAEANPWYEPYIL 120
DB 61 QVLFKGCGPSTHVLTHTSIRAVSYQTPVNLISAIRSPCQRETPGAEANPWYEPYIL 120
QY 121 GGVFQLEKGRDLRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGRDLRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 13
US-08-600-783-5
Sequence 5, Application US/08600783
Patent No. 5962267
GENERAL INFORMATION:
APPLICANT: SHIN, Hang Cheol
APPLICANT: CHANG, Seung Gu
APPLICANT: KIM, Dae Young
APPLICANT: KIM, Chong Suh
TITLE OF INVENTION: Proinsulin Derivative and Process
TITLE OF INVENTION: for Producing Human Insulin
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: SHIN, Hang Cheol
STREET: Ssangma-Hansein Apt. 102-1206,
STREET: #245 Cholsan-dong
CITY: Kwangmyung-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 423-030
ADDRESSEE: CHANG, Seung Gu

STREET: Hyundai Apt. 71-203, Apkujong-dong,
STREET: Kangnam-ku
CITY: Seoul
STATE: Seoul
COUNTRY: Republic of Korea
ZIP: 135-110
ADDRESSEE: KIM, Dae Young
STREET: Sosa Jukong Apt. 108-202, Sosa Bon-dong,
STREET: Sosa-ku
CITY: Bucheon-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 422-230
ADDRESSEE: KIM, Chong Suh
STREET: Garden Heights Apt. 202-801, #100,
STREET: Hwangkeum-dong, Soosung-ku
CITY: Taegu
STATE: Taegu
COUNTRY: Republic of Korea
ZIP: 706-040
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk, 3.5 inch, 1.44MB storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/600,783
FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: KR 95-2751
FILING DATE: 15-FEB-1995
ATTORNEY/AGENT INFORMATION:
NAME: Shahan Islam
REGISTRATION NUMBER: 32,507
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 278-1000
TELEFAX: (212) 953-7249
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-600-783-5

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAVHVNPAQEGQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDPKVAVHVNPAQEGQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTHTSIRAVSYQTPVNLISAIRSPCQRETPGAEANPWYEPYIL 120
DB 61 QVLFKGCGPSTHVLTHTSIRAVSYQTPVNLISAIRSPCQRETPGAEANPWYEPYIL 120
QY 121 GGVFQLEKGRDLRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGRDLRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 14
US-08-584-031-13
Sequence 13, Application US/08584031A
Patent No. 6030945
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi J.
TITLE OF INVENTION: APO-2 LIGAND
FILE REFERENCE: 11669.22US03

```
;
; CURRENT APPLICATION NUMBER: US/08/584,031A
; CURRENT FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
;
US-08-584-031-13

Query Match          95.7%; Score 779; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 61 QVLFSGQGPCSTHVLTHTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 61 QVLFKGQGPCSTHVLTHTISRIVSYQTKVNLLSAIKSPCORETPEGAEAKPWYEPYIL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

RESULT 15
US-08-714-960B-1
; Sequence 1, Application US/08714960B
; Patent No. 6121237
;
GENERAL INFORMATION:
; APPLICANT: RATHJEN, Deborah A
; APPLICANT: FERRANTE, Antonio
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BANNER & WITCOFF, LTD.
; STREET: 10 S. Wacker Drive, Suite 3000
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
;
COMPUTER READABLE FORM:
; MEDIUM TYPE: 1.44 Mb storage diskette, 3.50 inch
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: IBM compatible PC/MS-DOS
; SOFTWARE: WordPerfect version 6.1
;
CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/714,960B
; FILING DATE: 17-SEP-1996
; CLASSIFICATION: 514
;
PRIOR APPLICATION DATA:
; APPLICATION NUMBER: AU PJ9065
; FILING DATE: 12-MAR-1990
;
PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/AU91/00086
; FILING DATE: 12-MAR-1991
;
PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/930,415
; FILING DATE: 09-NOV-1992
;
PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/107,235
; FILING DATE: 16-AUG-1993
;
ATTORNEY/AGENT INFORMATION:
; NAME: Reiss, Robert H.
; REGISTRATION NUMBER: 32,168
; REFERENCE/DOCKET NUMBER: 92,622-B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 715-1000
; TELEFAX: (312) 715-1234
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
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;
; LENGTH: 157 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: not relevant
; MOLECULE TYPE: protein
; FEATURE:
;
; NAME/KEY: Protein
; LOCATION: 1..157
; OTHER INFORMATION: /note= "Human TNF"
;
US-08-714-960B-1

Query Match          95.7%; Score 779; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 61 QVLFSGQGPCSTHVLTHTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 61 QVLFKGQGPCSTHVLTHTISRIVSYQTKVNLLSAIKSPCORETPEGAEAKPWYEPYIL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

Search completed: May 5, 2006, 11:27:11
Job time : 16.25 secs
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GenCore version 5.1.7
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 11:26:23 ; Search time 45.5 Seconds
(without alignments)
1441.741 Million cell updates/sec

Title: US-10-668-178-3
Perfect score: 814
Sequence: 1 VRSSSRTPSDMPVAHVANP.....RPDYLDFAESGQVYFGIIAL 157

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA_Main:*

- 1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pap:*
- 2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pap:*
- 3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pap:*
- 4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pap:*
- 5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pap:*
- 6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	814	100.0	157	4	US-10-354-985-3
2	814	100.0	157	4	US-10-668-178-3
3	814	100.0	157	5	US-10-668-178-13
4	779	95.7	157	3	US-09-756-301A-1
5	779	95.7	157	3	US-09-927-703-1
6	779	95.7	157	3	US-09-854-280-19
7	779	95.7	157	3	US-09-934-465-13
8	779	95.7	157	3	US-09-766-535A-1
9	779	95.7	157	3	US-09-854-208-19
10	779	95.7	157	3	US-09-756-161A-1
11	779	95.7	157	3	US-09-903-327A-7
12	779	95.7	157	3	US-09-756-398B-1
13	779	95.7	157	3	US-09-897-724-1
14	779	95.7	157	4	US-10-010-229-1
15	779	95.7	157	4	US-10-043-450-1
16	779	95.7	157	4	US-10-044-534-1
17	779	95.7	157	4	US-10-059-007A-1
18	779	95.7	157	4	US-10-043-432-1
19	779	95.7	157	4	US-10-119-621-1
20	779	95.7	157	4	US-10-208-145-1
21	779	95.7	157	4	US-10-262-630-9
22	779	95.7	157	4	US-10-305-347A-9
23	779	95.7	157	4	US-10-198-845-1
24	779	95.7	157	4	US-10-227-488-1
25	779	95.7	157	4	US-10-170-812-7
26	779	95.7	157	4	US-10-187-121-1
27	779	95.7	157	4	US-10-176-460-1

28 779 95.7 157 4 US-10-186-559-1 Sequence 1, Appli

29 779 95.7 157 4 US-10-371-961-1 Sequence 1, Appli

30 779 95.7 157 4 US-10-200-795-1 Sequence 1, Appli

31 779 95.7 157 4 US-10-319-011-1 Sequence 1, Appli

32 779 95.7 157 4 US-10-371-443-1 Sequence 1, Appli

33 779 95.7 157 4 US-10-379-866-1 Sequence 1, Appli

34 779 95.7 157 4 US-10-371-962-1 Sequence 1, Appli

35 779 95.7 157 4 US-10-354-985-1 Sequence 1, Appli

36 779 95.7 157 4 US-10-397-786A-1 Sequence 1, Appli

37 779 95.7 157 4 US-10-665-971-1 Sequence 1, Appli

38 779 95.7 157 4 US-10-637-759-1 Sequence 1, Appli

39 779 95.7 157 4 US-10-327-619-1 Sequence 1, Appli

40 779 95.7 157 4 US-10-774-118-1 Sequence 1, Appli

41 779 95.7 157 4 US-10-394-471B-17 Sequence 17, Appli

42 779 95.7 157 5 US-10-861-685-13 Sequence 13, Appli

43 779 95.7 157 5 US-10-668-178-1 Sequence 1, Appli

44 779 95.7 157 5 US-10-957-134-1 Sequence 1, Appli

45 779 95.7 157 5 US-10-727-155-265 Sequence 265, App

ALIGNMENTS

RESULT 1

US-10-354-985-3

; Sequence 3, Application US/10354985

; Publication No. US20040001802A1

; GENERAL INFORMATION:

; APPLICANT: MAYUMI, Tadanori et al.

; TITLE OF INVENTION: PHYSIOLOGICALLY ACTIVE COMPLEX

; FILE REFERENCE: MAYUMI=2

; CURRENT APPLICATION NUMBER: US/10/354,985

; CURRENT FILING DATE: 2003-01-31

; PRIOR APPLICATION NUMBER: JP 083509/2002

; PRIOR FILING DATE: 2002-03-25

; PRIOR APPLICATION NUMBER: JP 1185387/2002

; PRIOR FILING DATE: 2002-06-26

; NUMBER OF SEQ ID NOS: 12

; SOFTWARE: PatentIn version 3.2

; SEQ ID NO 3

; LENGTH: 157

; TYPE: PRT

; ORGANISM: Artificial

; FEATURE:

; OTHER INFORMATION: Variant protein of human tumor necrosis factor

US-10-354-985-3

Query Match 100.0%; Score 814; DB 4; Length 157;

Best Local Similarity 100.0%; Pred. No. 2.7e-80;

Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 VRSSSRTPSDMPVAHVANPQAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Db 1 VRSSSRTPSDMPVAHVANPQAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Qy 61 QVLFSGQGCSTHVLTLTHTISRIASVYQTPVNLLSAIRSPCQRETPGAGANPWYPIYL 120

Db 61 QVLFSGQGCSTHVLTLTHTISRIASVYQTPVNLLSAIRSPCQRETPGAGANPWYPIYL 120

Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

Db 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 2

US-10-668-178-3

; Sequence 3, Application US/10668178

; Publication No. US20050013795A1

; GENERAL INFORMATION:

; APPLICANT: KARUSHIKI KATSHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO

; APPLICANT: MAYUMI, Tadanori

; APPLICANT: TSUTSUMI, Yasuo

; APPLICANT: NAKAGAWA, Shinsaku

```
; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMI2A
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 3
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: synthetic (Variant protein of human tumor necrosis factor)
US-10-668-178-3
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Query Match 100.0%; Score 814; DB 5; Length 157;
Best Local Similarity 100.0%; Pred. No. 2.7e-80;
Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYL 120
Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
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RESULT 3
US-10-668-178-13
; Sequence 13, Application US/10668178
; Publication No. US20050013795A1
; GENERAL INFORMATION:
; APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
; APPLICANT: MAYUMI, Tadanori
; APPLICANT: TSUTSUMI, Yasuo
; APPLICANT: NAKAGAWA, Shinsaku
; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMI2A
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Synthetic Construct
US-10-668-178-13
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Query Match 100.0%; Score 814; DB 5; Length 157;
Best Local Similarity 100.0%; Pred. No. 2.7e-80;
Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYL 120
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Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYL 120
QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
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RESULT 4
US-09-756-301A-1
; Sequence 1, Application US/09756301A
; Patent No. US20010027249A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-008
; CURRENT APPLICATION NUMBER: US/09/756.301A
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-756-301A-1
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Query Match 95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYL 120
Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAANPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIIAL 157
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RESULT 5
US-09-927-703-1
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; Sequence 1, Application US/09927703
; Patent No. US2002022720A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Wilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-013
; CURRENT APPLICATION NUMBER: US/09/927,703
; CURRENT FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-927-703-1

Query Match      95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY      1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB      1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY      61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYPIYL 120
DB      61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYPIYL 120

QY      121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB      121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 6
US-09-854-280-19
; Sequence 19, Application US/09854280
; Patent No. US20020052027A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Goddard, Audrey
; APPLICANT: Gurney, Austin
; APPLICANT: Li, Hanzhong

; APPLICANT: Wood, William I.
; TITLE OF INVENTION: IL-17C HOMOLOGOUS POLYPEPTIDES AND THERAPEUTIC USES THEREOF
; FILE REFERENCE: P1381RIC2
; CURRENT APPLICATION NUMBER: US/09/854,280
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: US 09/311,832
; PRIOR FILING DATE: 1999-05-14
; PRIOR APPLICATION NUMBER: US 60/085,579
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: US 60/113,621
; PRIOR FILING DATE: 1998-12-23
; NUMBER OF SEQ ID NOS: 26
; SEQ ID NO 19
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-854-280-19

Query Match      95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY      1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB      1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY      61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYPIYL 120
DB      61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYPIYL 120

QY      121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB      121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 7
US-09-934-465-13
; Sequence 13, Application US/09934465
; Patent No. US2002010233A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi J.
; TITLE OF INVENTION: APO-2 LIGAND
; FILE REFERENCE: 11669.22US03
; CURRENT APPLICATION NUMBER: US/09/934,465
; CURRENT FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 08/584,031
; PRIOR FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-934-465-13

Query Match      95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY      1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB      1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY      61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYPIYL 120
DB      61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYPIYL 120

QY      121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB      121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 8
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US-09-766-535A-1
; Sequence 1, Application US/09766535A
; Patent No. US20020106372A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-010
; CURRENT APPLICATION NUMBER: US/09/766,535A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-766-535A-1

Query Match          95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPFVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWTEPIYL 120
Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWTEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 10
US-09-756-161A-1
; Sequence 1, Application US/09756161A
; Patent No. US20020132307A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-007
; CURRENT APPLICATION NUMBER: US/09/756,161A
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-756-161A-1

Query Match          95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPFVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWTEPIYL 120
Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWTEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 9
US-09-854-208-19
; Sequence 19, Application US/09854208
; Patent No. US20020106743A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Goddard, Audrey
; APPLICANT: Gurney, Austin
; APPLICANT: Li, Hanzhong
; APPLICANT: Wood, William I.
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; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-756-161A-1

Query Match 95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSDPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHTRISIAVSQTPVNLSSAIRSPCQRETPGEGANPWYEPYIL 120
Db 61 QVLFKGCGCPSTHVLTHTRISIAVSQTPVNLSSAIRSPCQRETPGEGANPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 11

US-09-903-327A-7
; Sequence 7, Application US/09903327A
; Patent No. US20020164333A1
; GENERAL INFORMATION:
; APPLICANT: Nemerow, Glen R.
; TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET
; TITLE OF INVENTION: DELIVERY
; FILE REFERENCE: 22908-1228
; CURRENT APPLICATION NUMBER: US/09/903,327A
; CURRENT FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: 09/613,017
; PRIOR FILING DATE: 2000-07-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Human
; FEATURE:
; NAME/KEY: PEPTIDE
; LOCATION: (0)...(0)
; OTHER INFORMATION: Tumor necrosis factor-alpha (TNF alpha, mature
; OTHER INFORMATION: peptide)
US-09-903-327A-7

Query Match 95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSDPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHTRISIAVSQTPVNLSSAIRSPCQRETPGEGANPWYEPYIL 120
Db 61 QVLFKGCGCPSTHVLTHTRISIAVSQTPVNLSSAIRSPCQRETPGEGANPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 12

US-09-756-398B-1
; Sequence 1, Application US/09756398B

Publication No. US20030017584A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-006
; CURRENT APPLICATION NUMBER: US/09/756,398B
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-756-398B-1

Query Match 95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSDPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHTRISIAVSQTPVNLSSAIRSPCQRETPGEGANPWYEPYIL 120
Db 61 QVLFKGCGCPSTHVLTHTRISIAVSQTPVNLSSAIRSPCQRETPGEGANPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 13

US-09-897-724-1
; Sequence 1, Application US/09897724
; Publication No. US20030175837A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor

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; FILE REFERENCE: 0975.1005-012
; CURRENT APPLICATION NUMBER: US/09/897,724
; CURRENT FILING DATE: 2001-07-02
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-897-724-1

Query Match          95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTSDKPVAVHVPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGQCPSTHLLTHTTISRIVSYQTPVNLLSAISPCCORETPEGAEANPWYEPIYL 120
DB 61 QVLFKGQCPSTHLLTHTTISRIVSYQTKVNLLSAISPCCORETPEGAEAKPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
DB 121 GGVFQLEKGDRLSABINRPDYLDFAESGVYFGIIAL 157

RESULT 14
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; Sequence 1, Application US/10010229
; Publication No. US2002014805A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David M.
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-013
; CURRENT APPLICATION NUMBER: US/10/010,229
; CURRENT FILING DATE: 2001-12-07
; PRIOR APPLICATION NUMBER: US/09/927,703
; PRIOR FILING DATE: 2001-08-10
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-010-229-1

Query Match          95.7%; Score 779; DB 4; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTSDKPVAVHVPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGQCPSTHLLTHTTISRIVSYQTPVNLLSAISPCCORETPEGAEANPWYEPIYL 120
DB 61 QVLFKGQCPSTHLLTHTTISRIVSYQTKVNLLSAISPCCORETPEGAEAKPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
DB 121 GGVFQLEKGDRLSABINRPDYLDFAESGVYFGIIAL 157

RESULT 15
US-10-043-450-1
; Sequence 1, Application US/10043450
; Publication No. US20020141996A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-013
; CURRENT APPLICATION NUMBER: US/10/043,450
; CURRENT FILING DATE: 2002-01-10
; PRIOR APPLICATION NUMBER: 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-043-450-1

Query Match          95.7%; Score 779; DB 4; Length 157;
Best Local Similarity 96.2%; Pred No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTSDKPVAVHVPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGQCPSTHLLTHTTISRIVSYQTPVNLLSAISPCCORETPEGAEANPWYEPIYL 120
DB 61 QVLFKGQCPSTHLLTHTTISRIVSYQTKVNLLSAISPCCORETPEGAEAKPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
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Db 121 GGVFQLEKGDRLSAEINRPDYLLDFAESGOVYFGIHAL 157

Search completed: May 5, 2006, 11:30:22
Job time : 45.5 secs

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GenCore version 5.1.7
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 11:26:47 ; Search time 9.75 Seconds
(without alignments)
745.303 Million cell updates/sec

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Perfect score: 814
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Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 235405 seqs, 46284737 residues

Total number of hits satisfying chosen parameters: 235405

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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1: /SIDSS/ptodata/1/pubpaa/US08_NEW_PUB.pep.*
2: /SIDSS/ptodata/1/pubpaa/US06_NEW_PUB.pep.*
3: /SIDSS/ptodata/1/pubpaa/US07_NEW_PUB.pep.*
4: /SIDSS/ptodata/1/pubpaa/US08_NEW_PUB.pep.*
5: /SIDSS/ptodata/1/pubpaa/PCT_NEW_PUB.pep.*
6: /SIDSS/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
7: /SIDSS/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
8: /SIDSS/ptodata/1/pubpaa/US10_NEW_PUB.pep.*
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12: /SIDSS/ptodata/1/pubpaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	779	95.7	157	11	US-11-010-954-1
2	779	95.7	157	11	US-11-053-750-1
3	779	95.7	157	11	US-11-053-749-1
4	779	95.7	157	11	US-11-108-001-12
5	779	95.7	157	11	US-11-170-753-1
6	779	95.7	157	11	US-11-179-359-1
7	779	95.7	157	11	US-11-181-030-1
8	779	95.7	157	11	US-11-182-033-1
9	779	95.7	157	11	US-11-195-589-1
10	779	95.7	158	11	US-11-082-544-4
11	779	95.7	164	11	US-11-108-001-2
12	779	95.7	170	8	US-10-450-953-35
13	779	95.7	180	11	US-11-082-544-8
14	779	95.7	233	9	US-10-523-328-1
15	779	95.7	233	11	US-11-246-387-8
16	770	94.6	157	9	US-10-504-389A-55
17	634.5	77.9	235	11	US-11-032-797-8
18	488	60.0	104	11	US-11-065-669-5
19	488	60.0	104	11	US-11-249-714-5
20	213.5	26.2	177	9	US-10-999-866-61
21	213.5	26.2	205	9	US-10-995-561-1028

22	213.5	26.2	205	9	US-10-995-561-1029	Sequence 1029, Ap
23	171.5	21.1	204	11	US-11-136-341A-31	Sequence 31, Appl
24	171.5	21.1	240	11	US-11-136-341A-1	Sequence 1, Appl
25	169.5	20.8	240	9	US-10-987-663-6	Sequence 6, Appl
26	166.5	20.5	179	8	US-10-861-934-14	Sequence 14, Appl
27	166.5	20.5	179	8	US-10-861-934-14	Sequence 14, Appl
28	166.5	20.5	278	8	US-10-861-934-16	Sequence 16, Appl
29	166.5	20.5	278	8	US-10-861-934-16	Sequence 16, Appl
30	166.5	20.5	278	9	US-10-861-934-16	Sequence 16, Appl
31	166.5	20.5	278	9	US-10-861-934-16	Sequence 16, Appl
32	162	19.9	239	11	US-11-136-341A-2	Sequence 2, Appl
33	161.5	19.8	137	8	US-10-861-934-10	Sequence 10, Appl
34	161.5	19.8	137	9	US-10-861-934-10	Sequence 10, Appl
35	161.5	19.8	138	8	US-10-861-934-12	Sequence 12, Appl
36	161.5	19.8	138	9	US-10-861-934-12	Sequence 12, Appl
37	161.5	19.8	179	8	US-10-861-934-22	Sequence 22, Appl
38	161.5	19.8	179	9	US-10-861-934-22	Sequence 22, Appl
39	161.5	19.8	279	8	US-10-861-934-24	Sequence 24, Appl
40	161.5	19.8	279	8	US-10-861-934-32	Sequence 32, Appl
41	161.5	19.8	279	9	US-10-861-934-24	Sequence 24, Appl
42	161.5	19.8	279	9	US-10-861-934-32	Sequence 32, Appl
43	161.5	19.8	279	11	US-11-032-797-5	Sequence 5, Appl
44	160	19.7	239	11	US-11-136-341A-3	Sequence 3, Appl
45	157.5	19.3	137	8	US-10-861-934-18	Sequence 18, Appl

ALIGNMENTS

RESULT 1
US-11-010-954-1
; Sequence 1, Application US/11010954
; Publication No. US20050249735A1
; GENERAL INFORMATION:
; APPLICANT: Le Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Shealy, David
; TITLE OF INVENTION: Methods of Treating Ankylosing Spondylitis Using Anti-TNF Antibody
; FILE REFERENCE: 0975.1005-043
; CURRENT APPLICATION NUMBER: US/11/010,954
; CURRENT FILING DATE: 2004-12-13
; PRIOR APPLICATION NUMBER: US 10/637,759
; PRIOR FILING DATE: 2003-08-08
; PRIOR APPLICATION NUMBER: US 09/920,137
; PRIOR FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 60/236,826
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: US 60/223,360
; PRIOR FILING DATE: 2000-08-07
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-010-954-1

Query Match 95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
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Db 1 VRSSRTPSDMPVHVANPQAEGQLWNRNALLANGVELRDNLVVPSEGLYLIYS 60


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; FILE REFERENCE: A-68990-7
; CURRENT APPLICATION NUMBER: US/11/108,001
; CURRENT FILING DATE: 2005-04-14
; PRIOR APPLICATION NUMBER: US 10/963,994
; PRIOR FILING DATE: 2004-10-12
; PRIOR APPLICATION NUMBER: US 09/798,789
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: US 09/945,150
; PRIOR FILING DATE: 2001-08-31
; PRIOR APPLICATION NUMBER: US 09/981,289
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 10/262,630
; PRIOR FILING DATE: 2002-09-30
; PRIOR APPLICATION NUMBER: US 60/553,908
; PRIOR FILING DATE: 2004-03-17
; PRIOR APPLICATION NUMBER: US 60/510,430
; PRIOR FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: US 60/509,960
; PRIOR FILING DATE: 2003-10-09
; PRIOR APPLICATION NUMBER: US 60/528,275
; PRIOR FILING DATE: 2003-12-08
; PRIOR APPLICATION NUMBER: US 60/523,647
; PRIOR FILING DATE: 2003-11-20
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 12
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-108-001-12

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPVAVVAVNPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||

QY 61 QVLPFGQCGPSTHVLTTHTTSRIASVYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
   |||||
Db 61 QVLPFGQCGPSTHVLTTHTTSRIASVYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
   |||||

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
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Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157
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RESULT 5
US-11-170-753-1
; Sequence 1, Application US/11/10753
; Publication No. US20060013816A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods of Treating Psoriasis Using
; TITLE OF INVENTION: Human Anti-TNF Antibodies and Fragments
; FILE REFERENCE: 0975.1005-050
; CURRENT APPLICATION NUMBER: US/11/170,753
; CURRENT FILING DATE: 2005-06-29
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
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; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-170-753-1

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||
Db 1 VRSSRTPSDKPVAVVAVNPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||

QY 61 QVLPFGQCGPSTHVLTTHTTSRIASVYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
   |||||
Db 61 QVLPFGQCGPSTHVLTTHTTSRIASVYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
   |||||

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
   |||||
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157
   |||||

RESULT 6
US-11-179-359-1
; Sequence 1, Application US/11/179359
; Publication No. US20060018905A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods for Treating Systemic Lupus Erythematosus
; TITLE OF INVENTION: Using Anti-TNF Antibodies and Fragments Thereof
; FILE REFERENCE: 0975.1005-054
; CURRENT APPLICATION NUMBER: US/11/179,359
; CURRENT FILING DATE: 2005-07-12
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
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; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-179-359-1

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWPYEPYIL 120
Db 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWPYEPYIL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 7
US-11-181-030-1
; Sequence 1, Application US/11181030
; Publication No. US20060018906A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Wilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods for Treating Sarcoidosis Using
; TITLE OF INVENTION: Anti-TNF Antibodies and Fragments Thereof
; FILE REFERENCE: 0975.1005-055
; CURRENT APPLICATION NUMBER: US/11/181,030
; CURRENT FILING DATE: 2005-07-13
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1993-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-181-030-1

Query Match          95.7%; Score 779; DB 11; Length 157;
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Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWPYEPYIL 120
Db 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWPYEPYIL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 8
US-11-182-033-1
; Sequence 1, Application US/11182033
; Publication No. US20060018907A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Wilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Shealy, David
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of Human
; TITLE OF INVENTION: Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-044
; CURRENT APPLICATION NUMBER: US/11/182,033
; CURRENT FILING DATE: 2005-07-14
; PRIOR APPLICATION NUMBER: US 10/637,759
; PRIOR FILING DATE: 2003-08-08
; PRIOR APPLICATION NUMBER: US 09/920,137
; PRIOR FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 60/236,826
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: US 60/223,360
; PRIOR FILING DATE: 2000-08-07
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-182-033-1

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWPYEPYIL 120
Db 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWPYEPYIL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 9
US-11-195-589-1
; Sequence 1, Application US/11195589
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Tue May 9 11:18:22 2006

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; Publication No. US20060024310A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Wilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods of Treating TNF $\alpha$ -Mediated
; Tissue Injury Using Anti-TNF Antibodies and Peptides
; FILE REFERENCE: 0975.1005-042
; CURRENT APPLICATION NUMBER: US/11/195,589
; CURRENT FILING DATE: 2005-08-02
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: US 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: US 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: US 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: US 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: US 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: US 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: US 08/013,413
; PRIOR FILING DATE: 02-02-1993
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-11-195-589-1

Query Match 95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGCSTHVLTHITISRIASVQTPVNLLSAIRSCQRETPEGAENPWYBPIYL 120
Db 61 QVLFSGQGCSTHVLTHITISRIASVQTPVNLLSAIRSCQRETPEGAENPWYBPIYL 120
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 10
US-11-082-544-4
; Sequence 4, Application US/11082544
; Publication No. US20050249706A1
; GENERAL INFORMATION:
; APPLICANT: Bermudes, G.
; APPLICANT: King, I.
; APPLICANT: Clairmont, C.
; APPLICANT: Lin, S.
; APPLICANT: Belcourt, M.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; TUMOR-TARGETED DELIVERY OF EFFECTOR MOLECULES
; FILE REFERENCE: 8002-059
; CURRENT APPLICATION NUMBER: US/11/082,544
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; CURRENT FILING DATE: 2005-03-17
; PRIOR APPLICATION NUMBER: US/09/645,415
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/157,581
; PRIOR FILING DATE: 1999-10-04
; PRIOR APPLICATION NUMBER: 60/157,637
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 61
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 158
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-11-082-544-4

Query Match 95.7%; Score 779; DB 11; Length 158;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 2 VRSSRTSPDKPVAHVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 61
QY 61 QVLFSGQGCSTHVLTHITISRIASVQTPVNLLSAIRSCQRETPEGAENPWYBPIYL 120
Db 62 QVLFSGQGCSTHVLTHITISRIASVQTPVNLLSAIRSCQRETPEGAENPWYBPIYL 121
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157
Db 122 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 158

RESULT 11
US-11-108-001-2
; Sequence 2, Application US/11108001
; Publication No. US20050265962A1
; GENERAL INFORMATION:
; APPLICANT: Desjarlais, John R.
; APPLICANT: Steed, Paul Michael
; APPLICANT: Zalevsky, Jonathan
; APPLICANT: Szymkowski, David Edmund
; TITLE OF INVENTION: PROTEIN BASED TNF-ALPHA VARIANTS FOR THE TREATMENT OF TNF-ALPHA
; RELATED DISORDERS
; FILE REFERENCE: A-68990-7
; CURRENT APPLICATION NUMBER: US/11/108,001
; CURRENT FILING DATE: 2005-04-14
; PRIOR APPLICATION NUMBER: US 10/963,994
; PRIOR FILING DATE: 2004-10-12
; PRIOR APPLICATION NUMBER: US 09/798,789
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: US 09/945,150
; PRIOR FILING DATE: 2001-08-31
; PRIOR APPLICATION NUMBER: US 09/981,289
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 10/262,630
; PRIOR FILING DATE: 2002-09-30
; PRIOR APPLICATION NUMBER: US 60/553,908
; PRIOR FILING DATE: 2004-03-17
; PRIOR APPLICATION NUMBER: US 60/510,430
; PRIOR FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: US 60/509,960
; PRIOR FILING DATE: 2003-10-09
; PRIOR APPLICATION NUMBER: US 60/528,275
; PRIOR FILING DATE: 2003-12-08
; PRIOR APPLICATION NUMBER: US 60/523,647
; PRIOR FILING DATE: 2003-11-20
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 2
; LENGTH: 164
; TYPE: PRT
; ORGANISM: Homo sapiens
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US-11-108-001-2

Query Match 95.7%; Score 779; DB 11; Length 164;
Best Local Similarity 96.2%; Pred. No. 1.4e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 8 VRSSRTSDKPKVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 67
QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
DB 68 QVLFKGGQCPSTHLLTHTISRIASVYQTKVNLLSAIRSPCORETPEGAEAKPWYEPIYL 127
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 128 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 164

RESULT 12

US-10-490-953-35
Sequence 35, Application US/10490953
Publication No. US20060088908A1

GENERAL INFORMATION:

APPLICANT: SKERRA, ARNE
APPLICANT: SCHLEHUBER, STEFFEN
TITLE OF INVENTION: MOTIFS OF HUMAN NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN AND
FILE REFERENCE: 029029-0104
CURRENT APPLICATION NUMBER: US/10/490,953
CURRENT FILING DATE: 2004-03-29
PRIOR APPLICATION NUMBER: PCT/EP02/10490
PRIOR FILING DATE: 2002-09-18
PRIOR APPLICATION NUMBER: PCT/EP02/04223
PRIOR FILING DATE: 2002-04-16
PRIOR APPLICATION NUMBER: PCT/EP01/11213
PRIOR FILING DATE: 2001-09-27
NUMBER OF SEQ ID NOS: 39
SOFTWARE: PatentIn version 3.2
SEQ ID NO 35
LENGTH: 170
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Synthetic
OTHER INFORMATION: amino acid sequence
FEATURE:
NAME/KEY: CHAIN
LOCATION: (1)..(170)
OTHER INFORMATION: fusion protein of tumor necrosis factor alpha and
OTHER INFORMATION: affinity tag
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (1)..(13)
OTHER INFORMATION: Affinity tag Arg-Gly-Ser-His(6)-Gly(3)
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (14)..(170)
OTHER INFORMATION: mature tumor necrosis factor alpha

US-10-490-953-35

Query Match 95.7%; Score 779; DB 8; Length 170;
Best Local Similarity 96.2%; Pred. No. 1.5e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 14 VRSSRTSDKPKVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 73
QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
DB 74 QVLFKGGQCPSTHLLTHTISRIASVYQTKVNLLSAIRSPCORETPEGAEAKPWYEPIYL 133

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 134 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 170

RESULT 13

US-11-082-544-8
Sequence 8, Application US/11082544
Publication No. US20050249706A1

GENERAL INFORMATION:

APPLICANT: Bermudes, G.
APPLICANT: King, I.
APPLICANT: Clairmont, C.
APPLICANT: Lin, S.
APPLICANT: Belcourt, M.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: TUMOR-TARGETED DELIVERY OF EFFECTOR MOLECULES
FILE REFERENCE: 8002-059
CURRENT APPLICATION NUMBER: US/11/082,544
CURRENT FILING DATE: 2005-03-17
PRIOR APPLICATION NUMBER: US/09/645,415
PRIOR FILING DATE: 2000-08-24
PRIOR APPLICATION NUMBER: 60/157,581
PRIOR FILING DATE: 1999-10-04
PRIOR APPLICATION NUMBER: 60/157,637
PRIOR FILING DATE: 1999-10-04
NUMBER OF SEQ ID NOS: 61
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 8
LENGTH: 180
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Fusion construct

US-11-082-544-8

Query Match 95.7%; Score 779; DB 11; Length 180;
Best Local Similarity 96.2%; Pred. No. 1.6e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 24 VRSSRTSDKPKVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 83
QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
DB 84 QVLFKGGQCPSTHLLTHTISRIASVYQTKVNLLSAIRSPCORETPEGAEAKPWYEPIYL 143
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 144 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 180

RESULT 14

US-10-523-328-1
Sequence 1, Application US/10523328
Publication No. US20060078944A1

GENERAL INFORMATION:

APPLICANT: Kuai, Jun
APPLICANT: Lin, Lih-Ling
APPLICANT: Wothers, Joseph L.
APPLICANT: Nickbarg, Elliot
TITLE OF INVENTION: METHODS AND REAGENTS RELATING TO INFLAMMATION AND APOPTOSIS
FILE REFERENCE: WYTH-F01-001
CURRENT APPLICATION NUMBER: US/10/523,328
CURRENT FILING DATE: 2005-02-01
PRIOR APPLICATION NUMBER: 60/400,410
PRIOR FILING DATE: 2002-08-01
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.2
SEQ ID NO 1
LENGTH: 233
TYPE: PRT


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; ORGANISM: Homo sapiens
US-10-523-328-1
Query Match          95.7%; Score 779; DB 9; Length 233;
Best Local Similarity 96.2%; Pred. No. 2.2e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 77 VRSSRTPSDKPVAVVAVNPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136

Qy 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPYIL 120
Db 137 QVLFKQGCPSHTVLLTHTISRIAVSYQTKVNLLSAISKPCQRETPEGAEAKPWYEPYIL 196

Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 197 GGVFQLEKGRLSAEINRPDYLDFAESGGVYFGIIAL 233

RESULT 15
US-11-246-387-8
; Sequence 8, Application US/11246387
; Publication No. US20060078994A1
; GENERAL INFORMATION:
; APPLICANT: Argos Therapeutics, Inc.
; APPLICANT: Kirin Beer Kabushiki Kaisha
; APPLICANT: Healey, Don
; APPLICANT: Tcherepanova, Irina
; APPLICANT: Adams, Melissa
; APPLICANT: Hinohara, Atsushi
; TITLE OF INVENTION: MATURE DENDRITIC CELL COMPOSITIONS AND METHODS FOR CULTURING SAME
; FILE REFERENCE: MER030
; CURRENT APPLICATION NUMBER: US/11/246,387
; CURRENT FILING DATE: 2005-10-07
; PRIOR APPLICATION NUMBER: US 60/522,512
; PRIOR FILING DATE: 2004-10-07
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 8
; LENGTH: 233
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-246-387-8
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Query Match          95.7%; Score 779; DB 11; Length 233;
Best Local Similarity 96.2%; Pred. No. 2.2e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 77 VRSSRTPSDKPVAVVAVNPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136

Qy 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPYIL 120
Db 137 QVLFKQGCPSHTVLLTHTISRIAVSYQTKVNLLSAISKPCQRETPEGAEAKPWYEPYIL 196

Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 197 GGVFQLEKGRLSAEINRPDYLDFAESGGVYFGIIAL 233

Search completed: May 5, 2006, 11:28:33
Job time : 10.75 secs
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GenCore version 5.1.7
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:07 ; Search time 74.25 seconds
(without alignments)
929.057 Million cell updates/sec

Title: US-10-668-178-13
Perfect score: 814
Sequence: 1 VRSSRTSPDPVHVHVP.....RPDYLDFAESQVYFIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: Geneseq1980s.*
2: Geneseq1990s.*
3: Geneseq2000s.*
4: Geneseq2001s.*
5: Geneseq2002s.*
6: Geneseq2003as.*
7: Geneseq2003bs.*
8: Geneseq2004s.*
9: Geneseq2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	814	100.0	157	8	ADH10160 Human tum
2	807	99.1	157	9	AEB45433 TNF-R1 sp
3	806	99.0	157	9	AEB45432 TNF-R1 sp
4	805	98.9	157	9	AEB45434 TNF-R1 sp
5	803	98.6	157	9	AEB45430 TNF-R1 sp
6	800	98.3	157	9	AEB45453 TNF-R2 sp
7	799	98.2	157	9	AEB45431 TNF-R1 sp
8	795	97.7	157	9	AEB45454 TNF-R2 sp
9	793	97.4	157	9	AEB45469 TNF-R2 sp
10	792	97.3	157	9	AEB45438 TNF-R1 sp
11	792	97.3	157	9	AEB45436 TNF-R1 sp
12	792	97.3	157	9	AEB45461 TNF-R2 sp
13	791	97.2	157	9	AEB45460 TNF-R2 sp
14	791	97.2	157	9	AEB45464 TNF-R2 sp
15	790	97.1	157	9	AEB45472 TNF-R2 sp
16	790	97.1	157	9	AEB45471 TNF-R2 sp
17	790	97.1	157	9	AEB45455 TNF-R2 sp
18	790	97.1	157	9	AEB45456 TNF-R2 sp
19	790	97.1	157	9	AEB45474 TNF-R2 sp
20	790	97.1	157	9	AEB45457 TNF-R2 sp
21	790	97.1	157	9	AEB45475 TNF-R2 sp
22	789	96.9	157	9	AEB45458 TNF-R2 sp
23	789	96.9	157	9	AEB45473 TNF-R2 sp
24	789	96.9	157	9	AEB45467 TNF-R2 sp

25	789	96.9	157	9	AEB45468	Aeb45468 TNF-R2 sp
26	788	96.8	157	9	AEB45437	Aeb45437 TNF-R1 sp
27	788	96.8	157	9	AEB45462	Aeb45462 TNF-R2 sp
28	788	96.8	157	9	AEB45470	Aeb45470 TNF-R2 sp
29	787	96.7	157	9	AEB45456	Aeb45456 TNF-R2 sp
30	787	96.7	157	9	AEB45459	Aeb45459 TNF-R2 sp
31	787	96.7	157	9	AEB45465	Aeb45465 TNF-R2 sp
32	787	96.7	157	9	AEB45463	Aeb45463 TNF-R2 sp
33	785	96.4	157	9	AEB45429	Aeb45429 TNF-R1 sp
34	784	96.3	157	9	AEB45428	Aeb45428 TNF-R1 sp
35	784	96.3	157	9	AEB45425	Aeb45425 TNF-R1 sp
36	783	96.2	157	9	AEB45421	Aeb45421 Human TNF
37	782	96.1	157	9	AEB45427	Aeb45427 TNF-R1 sp
38	782	96.1	157	9	AEB45423	Aeb45423 Human TNF
39	782	96.1	157	9	AEB45435	Aeb45435 TNF-R1 sp
40	780	95.8	157	2	AAP62465	Aap62465 Tumour ne
41	779	95.7	157	1	AAP60524	Aap60524 Sequence
42	779	95.7	157	1	AAP70095	Aap70095 Tumour ne
43	779	95.7	157	1	AAP70144	Aap70144 Amino aci
44	779	95.7	157	2	AAR14270	Aar14270 Human TNF
45	779	95.7	157	2	AAR14112	Aar14112 Neutroph

ALIGNMENTS

RESULT 1
ADH10160
ID ADH10160 standard; protein; 157 AA.
XX
AC ADH10160;
XX
DT 11-MAR-2004 (first entry)
XX
DE Human tumour necrosis factor variant protein.
XX
KW TNF; tumour necrosis factor; polyethylene glycol; cytostatic; cancer;
KW human; variant.
XX
OS Homo sapiens.
XX
PN EP1354893-A2.
XX
PD 22-OCT-2003.
XX
PF 30-JAN-2003; 2003EP-00250587.
XX
PR 25-MAR-2002; 2002JP-00083509.
PR 26-JUN-2002; 2002JP-00185387.
XX
XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
PI Mayumi T, Tautsumi Y, Nakagawa S, Ikegami H;
XX
XX WPI: 2004-063952/07.
XX
XX N-PSDB; ADH10169.
XX
XX A physiologically active complex which comprises a protein part with
XX tumor necrosis factor activity and a high molecular part has higher
XX stability and retention in living bodies and is useful to treat disease,
XX particularly cancer.
XX
XX Example 1; SEQ ID NO 3; 18pp; English.
XX
XX The present sequence represents a physiologically active complex which
XX comprises a proteinaceous part with tumour necrosis factor (TNF) activity
XX and a high molecular part bound artificially to the N-terminus of the
XX proteinaceous part. The proteinaceous part comprises the sequence
XX selected from ADH10159 and the molecular part has a molecular weight of
XX 500-5000 Da and is a homopolymer of polyethylene glycol or a copolymer of

CC ethylene glycol and its derivatives. The invention is used to treat
 CC susceptible disease, particularly cancer. The complex has a higher
 CC stability and longer retention time in living bodies than intact tumor
 CC necrosis factor. The present sequence represents a human TNF variant
 CC protein.
 XX
 SQ Sequence 157 AA;

Query Match 100.0%; Score 814; DB 8; Length 157;
 Best Local Similarity 100.0%; Pred. No. 9.6e-76;
 Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120
 DB 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120
 QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 2
 AEB45433
 ID AEB45433 standard; protein; 157 AA.

AC AEB45433;
 XX
 DT 22-SEP-2005 (first entry)
 XX
 DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:17.
 XX
 KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
 KW antiinflammatory; cycostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutin.

XX Homo sapiens.
 OS Synthetic.
 XX
 PN WO2005066206-A1.
 XX
 PD 21-JUL-2005.
 XX
 PF 05-JAN-2005; 2005WO-JP0000032.
 XX
 PR 06-JAN-2004; 2004JP-00001427.
 XX
 PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 PA (MAYU/) MAYUMI T.
 PA (TSUT/) TSUTSUMI Y.
 PA (NAKA/) NAKAGAWA S.

XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 XX
 DR WPI; 2005-506850/51.
 DR N-PSDB; AEB45447.
 XX
 PT Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.
 XX
 PS Claim 4; SEQ ID NO 17; 3app; Japanese.

CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC a TNF (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC human TNF-alpha protein comprising an amino acid sequence derived from the
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX Sequence 157 AA;

Query Match 99.1%; Score 807; DB 9; Length 157;
 Best Local Similarity 98.7%; Pred. No. 5.1e-75;
 Matches 155; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
 QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120
 DB 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPIYL 120
 QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 3
 AEB45432
 ID AEB45432 standard; protein; 157 AA.

AC AEB45432;
 XX
 DT 22-SEP-2005 (first entry)
 XX
 DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:16.
 XX
 KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
 KW antiinflammatory; cycostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutin.
 XX Homo sapiens.
 OS Synthetic.
 XX
 PN WO2005066206-A1.
 XX
 PD 21-JUL-2005.
 XX
 PF 05-JAN-2005; 2005WO-JP0000032.
 XX
 PR 06-JAN-2004; 2004JP-00001427.

PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
XX
XX WPI; 2005-506850/51.
XX N-PSDB; AEB45446.
XX
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX
XX Claim 4; SEQ ID NO 16; 34pp; Japanese.
XX
XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, testenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 157 AA;
Query Match 99.0%; Score 806; DB 9; Length 157;
Best Local Similarity 98.7%; Pred. No. 6.4e-75;
Matches 155; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLNLSAIRSPCQRETPGAEANPWYPIYL 120
DB 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLNLSAIRSPCQRETPGAEANPWYPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFASGGQVYFGIALL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFRETGGVYFGIALL 157
RESULT 4
AEB45434
ID AEB45434 standard; protein; 157 AA.
XX
XX AEB45434;
XX
XX 22-SEP-2005 (first entry)
XX
XX TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:18.
XX
XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimers disease;

KW antinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutuin.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX WO2005066206-A1.
XX
XX 21-JUL-2005.
XX
XX 05-JAN-2005; 2005WO-JP0000032.
XX
XX 06-JAN-2004; 2004JP-00001427.
XX
XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
XX
XX WPI; 2005-506850/51.
XX N-PSDB; AEB45448.
XX
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX
XX Claim 4; SEQ ID NO 18; 34pp; Japanese.
XX
XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, testenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 157 AA;
Query Match 99.0%; Score 806; DB 9; Length 157;
Best Local Similarity 98.7%; Pred. No. 6.4e-75;
Matches 155; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLNLSAIRSPCQRETPGAEANPWYPIYL 120
DB 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLNLSAIRSPCQRETPGAEANPWYPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFASGGQVYFGIALL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFRETGGVYFGIALL 157
Query Match 98.9%; Score 805; DB 9; Length 157;
Best Local Similarity 98.7%; Pred. No. 8.2e-75;
Matches 155; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLNLSAIRSPCQRETPGAEANPWYPIYL 120
DB 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLNLSAIRSPCQRETPGAEANPWYPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFASGGQVYFGIALL 157
|||||

Db 121 GGVFQLEPGDRLSAEINRPDYLDFAHQGVYFGIIAL 157

RESULT 5
ABB45430
ID AEB45430 standard; protein; 157 AA.

XX AC AEB45430;
XX DT 22-SEP-2005 (first entry)
XX DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:14.
XX KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmoid infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutein.

XX OS Homo sapiens.
XX OS Synthetic.
XX PN WO2005066206-A1.
XX PD 21-JUL-2005.
XX PF 05-JAN-2005; 2005WO-JP000032.
XX PR 06-JAN-2004; 2004JP-00001427.
XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX PI Mayumi T, Teutsumi Y, Nakagawa S, Ohta T;
XX WPI; 2005-506850/51.
XX N-PSDB; AEB45444.

XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX Claim 4; SEQ ID NO 14; 34pp; Japanese.

XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

XX SQ Sequence 157 AA;
XX Query Match 98.6%; Score 803; DB 9; Length 157;
XX Best Local Similarity 98.1%; Pred. No. 1.3e-74;
XX Matches 154; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQOLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTSDMPVAHVANPQAEQOLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTTHTISRIASVYQTPVNLISAIRSPCORETPEGAENPWEPIYL 120
DB 61 QVLFSGGCGPSTHVLTTHTISRIASVYQTPVNLISAIRSPCORETPEGAENPWEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAHQGVYFGIIAL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFAHQGVYFGIIAL 157

RESULT 6
ABB45453
ID AEB45453 standard; protein; 157 AA.
XX AC AEB45453;
XX DT 22-SEP-2005 (first entry)
XX DE TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:37.
XX KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmoid infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutein.

XX OS Homo sapiens.
XX OS Synthetic.
XX PN WO2005066206-A1.
XX PD 21-JUL-2005.
XX PF 05-JAN-2005; 2005WO-JP000032.
XX PR 06-JAN-2004; 2004JP-00001427.
XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX PI Mayumi T, Teutsumi Y, Nakagawa S, Ohta T;
XX WPI; 2005-506850/51.
XX N-PSDB; AEB45476.

XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX Claim 5; SEQ ID NO 37; 34pp; Japanese.

XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.

CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX Sequence 157 AA;

Query Match 98.3%; Score 800; DB 9; Length 157;
Best Local Similarity 98.7%; Pred. No. 2.7e-74;
Matches 155; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 VRSSRTSPDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
DB 1 VRSSRTSPDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
QY 61 QVLFSGQCGPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
DB 61 QVLFSGQCGPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFABESGVYFGIALL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFABESGVYFGIALL 157

RESULT 7
AEB45431
ID AEB45431 standard; protein; 157 AA.

XX AEB45431;
XX
XX 22-SEP-2005 (first entry)
XX
XX TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No.15.
XX
XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
KW antinflammatory; cytostatic; antineumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutain.

OS Homo sapiens.
OS Synthetic.
XX
XX WO2005066206-A1.
XX
XX 21-JUL-2005.
XX
XX 05-JAN-2005; 2005WO-JP000032.
XX
XX 06-JAN-2004; 2004JP-00001427.
XX
XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.

PI Mayumi T, Teutsumi Y, Nakagawa S, Ohta T;
XX WPI; 2005-506850/51.
DR N-PSDB; AEB45445.
XX
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
XX and/or preventing diseases such as inflammation, and other diseases
XX caused by overexpression of TNF, such as autoimmune diseases, tumor,
XX rheumatoid arthritis, allergy.
XX
XX Claim 4; SEQ ID NO 15; 34pp; Japanese.

XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
XX particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
XX TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
XX a TNF mutant protein comprising an amino acid sequence derived from the
XX human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
XX one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
XX N-terminus, and amino acid residues at positions 84-89 by other amino
XX acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF mutant
XX protein. The TNF mutant proteins are useful for treating and/or
XX preventing diseases such as inflammation, and other diseases caused by
XX overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
XX cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
XX Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
XX transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
XX respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
XX lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
XX etc. The TNF mutant proteins are highly stable in vivo. This sequence
XX represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
XX The sequence data for this patent did not form part of the printed
XX specification, but was obtained in electronic format directly from WIPO
XX at ftp.wipo.int/pub/published_pct_sequences.

XX Sequence 157 AA;

Query Match 98.2%; Score 799; DB 9; Length 157;
Best Local Similarity 98.1%; Pred. No. 3.4e-74;
Matches 154; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 VRSSRTSPDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
DB 1 VRSSRTSPDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
QY 61 QVLFSGQCGPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
DB 61 QVLFSGQCGPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFABESGVYFGIALL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFABESGVYFGIALL 157

RESULT 8
AEB45454
ID AEB45454 standard; protein; 157 AA.

XX AEB45454;

XX
XX 22-SEP-2005 (first entry)
XX
XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No.38.

XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
KW antinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutain.

XX Homo sapiens.
OS Synthetic.
XX WO2005066206-A1.
PN PD 21-JUL-2005.
XX PF 05-JAN-2005; 2005WO-JP0000032.
XX PR 06-JAN-2004; 2004JP-00001427.
XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX Mayumi T, Teutsuimi Y, Nakagawa S, Ohta T;
PI WPI: 2005-506850/51.
XX DR N-PSDB; AEB45477.
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX Claim 5; SEQ ID NO 38; 34pp; Japanese.
XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX Sequence 157 AA;
SQ

Query Match 97.7%; Score 795; DB 9; Length 157;
Best Local Similarity 98.1%; Pred. No. 8.8e-74;
Matches 154; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
Db 1 VRSSRTPSDMPVAHVANPQAEGLQWNTGYANALLANGVELRDNLQVPSSEGLYLIYS 60
QY 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPGEANPWPEIYL 120
Db 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPGEANPWPEIYL 120
QY 121 GGVFQLEPGDRLSAENRPDYLDFAESGGVYFGIALL 157
Db 121 GGVFQLEPGDRLSAENRPDYLDFAESGGVYFGIALL 157

RESULT 9
AEB45469

ID AEB45469 standard; protein; 157 AA.
XX AC AEB45469;
XX DT 22-SEP-2005 (first entry)
XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:53.
XX tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmoid infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutein.
XX Homo sapiens.
OS Synthetic.
XX WO2005066206-A1.
XX PD 21-JUL-2005.
XX PF 05-JAN-2005; 2005WO-JP0000032.
XX PR 06-JAN-2004; 2004JP-00001427.
XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX Mayumi T, Teutsuimi Y, Nakagawa S, Ohta T;
PI WPI: 2005-506850/51.
XX DR N-PSDB; AEB45492.
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
PT and/or preventing diseases such as inflammation, and other diseases
PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
PT rheumatoid arthritis, allergy.
XX Claim 5; SEQ ID NO 53; 34pp; Japanese.
XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
CC a TNF mutant protein comprising an amino acid sequence derived from the
CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
CC N-terminus, and amino acid residues at positions 84-89 by other amino
CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
CC protein. The TNF mutant proteins are useful for treating and/or
CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX Sequence 157 AA;
SQ

Query Match 97.4%; Score 793; DB 9; Length 157;
Best Local Similarity 97.5%; Pred. No. 1.4e-73;

Matches 153; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
DB 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 10
AEB45438
ID AEB45438 standard; protein; 157 AA.
XX
AC AEB45438;
DT 22-SEP-2005 (first entry)
XX
DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:22.
XX
KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutain.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO2005066206-A1.
XX
XX 21-JUL-2005.
XX
XX 05-JAN-2005; 2005WO-JP000032.
XX
XX 06-JAN-2004; 2004JP-00001427.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
PI Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
XX
XX WPI; 2005-506850/51.
XX N-PSDB; AEB45452.
XX
XX Novel tumor necrosis factor TNF mutant protein, useful for treating
XX and/or preventing diseases such as inflammation, and other diseases
XX caused by overexpression of TNF, such as autoimmune diseases, tumor,
XX rheumatoid arthritis, allergy.
XX
XX Claim 4; SEQ ID NO 22; 34pp; Japanese.
XX
XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
XX particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
XX TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
XX a TNF mutant protein comprising an amino acid sequence derived from the
XX human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
XX one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
XX N-terminus, and amino acid residues at positions 84-89 by other amino
XX acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
XX mutant protein; and (2) a TNF formulation comprising a TNF mutant
XX protein. The TNF mutant proteins are useful for treating and/or

CC preventing diseases such as inflammation, and other diseases caused by
CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX
XX Sequence 157 AA;
Query Match 97.3%; Score 792; DB 9; Length 157;
Best Local Similarity 97.5%; Pred. No. 1.8e-73;
Matches 153; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
DB 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAANPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 11
AEB45436
ID AEB45436 standard; protein; 157 AA.
XX
AC AEB45436;
XX
DT 22-SEP-2005 (first entry)
XX
DE TNF-R1 specific human TNF-alpha mutant protein, SEQ ID No:20.
XX
KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
KW vasotropic; cerebroprotective; dermatological; immunomodulator;
KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
KW mutain.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO2005066206-A1.
XX
XX 21-JUL-2005.
XX
XX 05-JAN-2005; 2005WO-JP000032.
XX
XX 06-JAN-2004; 2004JP-00001427.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
PA (MAYU/) MAYUMI T.
PA (TSUT/) TSUTSUMI Y.
PA (NAKA/) NAKAGAWA S.
XX
PI Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
XX
XX WPI; 2005-506850/51.
XX N-PSDB; AEB45450.
XX

PT Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.

XX PS Claim 4; SEQ ID NO 20; 34pp; Japanese.

XX CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R1. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX SQ Sequence 157 AA;

Query Match 97.3%; Score 792; DB 9; Length 157;
 Best Local Similarity 97.5%; Pred. No. 1.8e-73;
 Matches 153; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
 QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGEAANPWYEPIYL 120
 DB 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGEAANPWYEPIYL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIALL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIALL 157

RESULT 12
 AEB45461
 ID AEB45461 standard; protein; 157 AA.

XX AC AEB45461;

XX DT 22-SEP-2005 (first entry)

XX DE TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:45.

XX KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmodium infection; meningitis; hepatitis; Alzheimer's disease;
 KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutcin.

XX OS Homo sapiens.

XX OS Synthetic.

XX XX WO200506206-A1.

DT 22-SEP-2005 (first entry)

XX PD 21-JUL-2005.
 XX PF 05-JAN-2005; 2005WO-JP0000032.
 XX PR 06-JAN-2004; 2004JP-00001427.

XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 XX PA (MAYU/) MAYUMI T.
 XX PA (TSUT/) TSUTSUMI Y.
 XX PA (NAKA/) NAKAGAWA S.

XX PI Mayumi T, Tsutsumi Y, Nakagawa S, Ohka T;

XX DR WPI; 2005-506850/51.
 XX DR N-PSDB; AEB45484.

XX PT Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.

XX PS Claim 5; SEQ ID NO 45; 34pp; Japanese.

XX CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX SQ Sequence 157 AA;

Query Match 97.3%; Score 792; DB 9; Length 157;
 Best Local Similarity 96.8%; Pred. No. 1.8e-73;
 Matches 152; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVPSSEGLYLIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGEAANPWYEPIYL 120
 DB 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGEAANPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIALL 157

DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGQVYFGIALL 157

RESULT 13

AEB45460

ID AEB45460 standard; protein; 157 AA.

XX AC AEB45460;

XX DE TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:44.
 XX KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmodium infection; meningitis; hepatitis; Alzheimers disease;
 KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutein.
 XX OS Homo sapiens.
 XX OS Synthetic.
 XX PN WO2005066206-A1.
 XX PD 21-JUL-2005.
 XX XX 05-JAN-2005; 2005WO-JP000032.
 XX XX 06-JAN-2004; 2004JP-00001427.
 XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 XX PA (MAYU/) MAYUMI T.
 XX PA (TSUT/) TSUTSUMI Y.
 XX PA (NAKA/) NAKAGAWA S.
 XX PI Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 XX WPI; 2005-506850/51.
 XX DR N-PSDB; AEB45483.
 XX XX Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.
 XX XX Claim 5; SEQ ID NO 44; 34pp; Japanese.
 XX XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.
 XX SQ Sequence 157 AA;
 XX SQ Query Match 97.2%; Score 791; DB 9; Length 157;
 XX SQ Best Local Similarity 96.8%; Pred. No. 2.3e-73;
 XX SQ Matches 152; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
 Qy 1 VRSSRTPSDMPVAVVAVNPQAEQQLWLNRRNALLANGVELRDNLQVLPSEGLYLIYS 60
 Db 1 VRSSRTPSDMPVAVVAVNPQAEQQLWLNRRNALLANGVELRDNLQVLPSEGLYLIYS 60

QY 61 QVLFSGQGCPTSTHVLTLTHTISRIASVSYQTPVNLLSAIRSPCQRETPEGAENPWYBPIYL 120
 Db 61 QVLFSGQGCPTSTHVLTLTHTISRIASVSYQTPVNLLSAIRSPCQRETPEGAENPWYBPIYL 120
 QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
 Db 121 GGVFQLEPGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
 RESULT 14
 AEB45464
 ID AEB45464 standard; protein; 157 AA.
 XX AC AEB45464;
 XX XX 22-SEP-2005 (first entry)
 XX XX TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:48.
 XX KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmodium infection; meningitis; hepatitis; Alzheimers disease;
 KW antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutein.
 XX OS Homo sapiens.
 XX OS Synthetic.
 XX PN WO2005066206-A1.
 XX PD 21-JUL-2005.
 XX XX 05-JAN-2005; 2005WO-JP000032.
 XX XX 06-JAN-2004; 2004JP-00001427.
 XX PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 XX PA (MAYU/) MAYUMI T.
 XX PA (TSUT/) TSUTSUMI Y.
 XX PA (NAKA/) NAKAGAWA S.
 XX PI Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 XX WPI; 2005-506850/51.
 XX DR N-PSDB; AEB45487.
 XX XX Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 XX rheumatoid arthritis, allergy.
 XX XX Claim 5; SEQ ID NO 48; 34pp; Japanese.
 XX XX The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute

CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX SQ Sequence 157 AA;

Query Match 97.2%; Score 791; DB 9; Length 157;
 Best Local Similarity 96.8%; Pred. No. 2.3e-73;
 Matches 152; Conservative 1; Mismatches 4; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 QY 61 QVLFSGGCGPSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
 DB 61 QVLFSGGCGPSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157

RESULT 15
 AEB45472
 ID AEB45472 standard; protein; 157 AA.
 AC AEB45472;
 XX
 XX
 DT 22-SEP-2005 (first entry)
 XX
 DE TNF-R2 specific human TNF-alpha mutant protein, SEQ ID No:56.
 XX
 KW tumor necrosis factor-alpha; TNF-alpha; TNF inhibitor; inflammation;
 KW autoimmune disease; tumor; transplant rejection; cardiovascular disease;
 KW acquired immune deficiency syndrome; severe acute respiratory syndrome;
 KW plasmoidium infection; meningitis; hepatitis; Alzheimer's disease;
 KW antiinflammatory; cyclostatic; antirheumatic; antiarthritic; antiallergic;
 KW antipsoriatic; anti-HIV; antiarteriosclerotic; immunosuppressive;
 KW vasotropic; cerebroprotective; dermatological; immunomodulator;
 KW antimalarial; antibacterial; hepatotropic; neuroprotective; nootropic;
 KW mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FN WO2005066206-A1.
 XX
 PD 21-JUL-2005.
 XX
 PF 05-JAN-2005; 2005WO-JP000032.
 XX
 PR 06-JAN-2004; 2004JP-00001427.
 XX
 PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 PA (MAYU/) MAYUMI T.
 PA (TSUT/) TSUTSUMI Y.
 PA (NAXA/) NAKAGAWA S.
 XX
 XX Mayumi T, Tsutsumi Y, Nakagawa S, Ohta T;
 PI
 XX
 DR WPI: 2005-506850/51.
 DR N-PSDB; AEB45495.
 XX
 PT Novel tumor necrosis factor TNF mutant protein, useful for treating
 PT and/or preventing diseases such as inflammation, and other diseases
 PT caused by overexpression of TNF, such as autoimmune diseases, tumor,
 PT rheumatoid arthritis, allergy.

PS Claim 5; SEQ ID NO 56; 34pp; Japanese.
 XX
 CC The invention relates to tumor necrosis factor (TNF) mutant proteins,
 CC particularly tumor necrosis factor mutant proteins specific for TNF-R1 or
 CC TNF-R2 (SEQ ID Nos 19-22 and 37-59 respectively). The invention discloses
 CC a TNF mutant protein comprising an amino acid sequence derived from the
 CC human TNF-alpha protein (given as SEQ ID No: 1) by the substitution of
 CC one or more amino acid residues at 29, 31, 32, 145, 146 and 147 from the
 CC N-terminus, and amino acid residues at positions 84-89 by other amino
 CC acid residue(s). Also described are: (1) a TNF inhibitor comprising a TNF
 CC mutant protein; and (2) a TNF formulation comprising a TNF mutant
 CC protein. The TNF mutant proteins are useful for treating and/or
 CC preventing diseases such as inflammation, and other diseases caused by
 CC overexpression of TNF, such as autoimmune diseases, tumors (e.g. colon
 CC cancer, rectal cancer, uterine cancer, brain tumor, leukemia, lymphoma),
 CC Crohn's disease, rheumatoid arthritis, allergies, psoriasis, cachexia,
 CC transplant rejection, stroke, ischemia, restenosis, AIDS, severe acute
 CC respiratory syndrome (SARS), atherosclerosis, Behcet's disease, systemic
 CC lupus erythematosus, malaria, meningitis, hepatitis, Alzheimer's disease,
 CC etc. The TNF mutant proteins are highly stable in vivo. This sequence
 CC represents a human TNF-alpha mutant protein specific for TNF-R2. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic format directly from WIPO
 CC at ftp.wipo.int/pub/published_pct_sequences.

XX SQ Sequence 157 AA;

Query Match 97.1%; Score 790; DB 9; Length 157;
 Best Local Similarity 96.8%; Pred. No. 2.9e-73;
 Matches 152; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 QY 61 QVLFSGGCGPSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
 DB 61 QVLFSGGCGPSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
 QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157
 DB 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIIAL 157

Search completed: May 5, 2006, 11:26:33
 Job time : 75.25 secs

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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:42 ; Search time 18 Seconds
(without alignments)
839.224 Million cell updates/sec

Title: US-10-668-178-13

Perfect score: 814

Sequence: 1 VRSSSRTPSDMPVAHVANP.....RPDYLDFASSGVYFGIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

PIR 80:.*
1: pir1.*
2: pir2.*
3: pir3.*
4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	779	95.7	233	1 QWHUN	tumor necrosis fac
2	772	94.8	233	1 S22052	tumor necrosis fac
3	712	87.5	233	2 S11688	tumor necrosis fac
4	697	85.6	234	1 JQ1344	tumor necrosis fac
5	677.5	83.2	232	1 S12606	tumor necrosis fac
6	634.5	77.9	235	1 QWMSN	tumor necrosis fac
7	633.5	77.8	234	1 A25451	tumor necrosis fac
8	631	77.5	185	2 S52715	tumor necrosis fac
9	631	77.5	233	1 S24642	tumor necrosis fac
10	629	77.3	234	1 JH0529	tumor necrosis fac
11	628.5	77.2	235	2 I54490	tumor necrosis fac
12	624.5	76.7	193	2 S06192	tumor necrosis fac
13	619.5	76.1	235	2 JU0029	tumor necrosis fac
14	538.5	31.8	197	1 JH0309	tumor necrosis fac
15	250.5	30.8	204	1 S24641	lymphotoxin - bovi
16	247.5	30.4	204	1 S17289	tumor necrosis fac
17	238	29.2	202	1 JN0869	tumor necrosis fac
18	236.5	29.1	202	1 B27303	tumor necrosis fac
19	213.5	26.2	205	1 QWHUX	lymphotoxin alpha
20	173	21.3	244	2 A46066	lymphotoxin beta -
21	166.5	20.5	278	2 A49266	fas ligand - rat
22	161.5	19.8	279	2 A53062	Fas ligand - mouse
23	149	18.3	281	2 I38707	Fas ligand - human
24	143	17.6	306	2 I49139	lymphotoxin-beta -
25	129	15.8	261	2 I53476	CD40 ligand - huma
26	127	15.6	260	2 S21738	CD40 ligand - mous
27	116	14.3	261	2 S53090	CD40 ligand - bovi
28	80	9.8	1560	2 T09202	probable tail comp
29	77.5	9.5	675	2 E75393	hypothetical prote

ALIGNMENTS

RESULT 1

QWHUN

tumor necrosis factor alpha precursor [validated] - human

N;Alternate names: cachectin; TNFA

C;Species: Homo sapiens (man)

C;Date: 28-Aug-1985 #sequence revision 28-Aug-1985 #text change 09-Jul-2004

C;Accession: A93585; S36153; A93351; A44189; B61478; I53311; S62610; I54532; A01646; B2

R;Nedwin, G.E.; Navlor, S.L.; Sakaguchi, A.Y.; Smith, D.; Jarrett-Nedwin, J.; Pennica,

Nucleic Acids Res. 13, 6361-6373, 1985

A;Title: Human lymphotoxin and tumor necrosis factor genes: structure, homology and chr

A;Reference number: A93585; MUID:86016093; PMID:2995927

A;Accession: A93585

A;Molecule type: DNA

A;Residues: 1-233 <NED>

A;Cross-references: UNIPROT:P01375; UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:93

R;Pernica, D.; Nedwin, G.E.; Hayflick, J.S.; Seeburg, P.H.; Derynck, R.; Palladino, M.A

Nature Genet. 3, 137-145, 1993

A;Title: Dense Alu clustering and a potential new member of the NFkappaB family within

A;Reference number: S36152; MUID:93272029; PMID:8499947

A;Accession: S36153

A;Status: nucleic acid sequence not shown; translation not shown

A;Molecule type: DNA

A;Residues: 1-233 <IRI>

A;Cross-references: UNIPARC:UPI000000D745; EMBL:Z15026; NID:937211; PIDN:CAA7845.1; PI

A;Note: the nucleotide sequence was submitted to the EMBL Data Library, August 1992

R;Pennica, D.; Nedwin, G.E.; Hayflick, J.S.; Seeburg, P.H.; Derynck, R.; Palladino, M.A

Nature 312, 724-729, 1984

A;Title: Human tumour necrosis factor: precursor structure, expression and homology to

A;Reference number: A93351; MUID:85086244; PMID:6392892

A;Accession: A93351

A;Molecule type: mRNA

A;Residues: 1-233 <PEN>

A;Cross-references: UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:937209; PIDN:CAA26

A;Note: this protein was isolated from the monocyte-like cell line HL-60 from a promyel

R;Wang, A.M.; Creasey, A.A.; Ladner, M.B.; Lin, L.S.; Strickler, J.; Van Arsdel, J.N.;

Science 228, 149-154, 1985

A;Title: Molecular cloning of the complementary DNA for human tumor necrosis factor.

A;Reference number: A44189; MUID:85142190; PMID:3856324

A;Accession: A44189

A;Molecule type: mRNA

A;Residues: 1-62, 'S', 64-233 <WAN>

A;Cross-references: UNIPARC:UPI000002PB8A; GB:M10988; NID:9339737; PIDN:AAA61198.1; PID

R;Fukuda, S.; Ando, S.; Sanou, O.; Tani, M.; Masaki, N.; Nakamura, K.I.;

Lymphokine Res. 7, 175-185, 1988

A;Title: Simultaneous production of natural human tumor necrosis factor-alpha, -beta ar

A;Reference number: A61478; MUID:88301617; PMID:2841543

A;Accession: B61478

A;Molecule type: protein

A;Residues: 83-102;109-119;121-128, 'X', 130-131;142-144, 'X', 146, 'XXX', 150-152;159-174;18

A;Cross-references: UNIPARC:UPI00001735C7; UNIPARC:UPI00001735C8; UNIPARC:UPI00001735C9

R;Marmenout, A.; Franssen, L.; Tavernier, J.; Van Der Heyden, J.; Tizard, R.; Kawashima,

Eur. J. Biochem. 152, 515-522, 1985

A:Title: Molecular cloning and expression of human tumor necrosis factor and comparison
A:Reference number: I53111; MUID:86030296; PMID:3932069
A:Accession: I53111
A:Status: translated from GB/EMBL/DBDJ
A:Molecule type: DNA
A:Residues: 1-233 <MAR>
A:Cross-references: UNIPARC:UPI0000000745; GB:M26331; NID:G339763; PIDN:AAA36758.1; PID:
R:Sanjanwala, M.; Edwards, A.
A:Description: Baboon Tumor Necrosis Factor Derived from Sequences of Genomic DNA.
A:Reference number: S22052
A:Accession: S22052
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-233 <SAN>
A:Cross-references: UNIPROT:P33620; UNIPARC:UPI00001370C4; EMBL:XG2141; NID:G38159; PIDN:
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 94.8%; Score 772; DB 1; Length 233;
Best Local Similarity 95.5%; Pred. No. 2.5e-71;
Matches 150; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 77 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 136

QY 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTQVNVLLSAIRSPCORETPEGAEANPWYEPYIL 120
Db 137 QVLFSGQGPCSTHLLTHTTISRIVSYQTQVNVLLSAIRSPCORETPEGAEANPWYEPYIL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
Db 197 GGVFQLEKGRDLSAEINRPDYLDFAESGVYFGIIAL 233

RESULT 3
S11688
tumor necrosis factor alpha precursor - cat
C:Species: Felis silvestris catus (domestic cat)
C:Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
A:Accession: S11688
R:McGraw, R.A.; Coffee, B.W.; Otto, C.M.; Drews, R.T.; Rawlings, C.A.
Nucleic Acids Res. 18, 5563, 1990
A:Title: Gene sequence of feline tumor necrosis factor alpha.
A:Reference number: S11688; MUID:91016860; PMID:2216740
A:Accession: S11688
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-233 <MCG>
A:Cross-references: UNIPROT:P19101; UNIPARC:UPI00001370BE; EMBL:X54000; NID:gl084; PIDN:
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 87.5%; Score 712; DB 2; Length 233;
Best Local Similarity 88.5%; Pred. No. 3.4e-65;
Matches 139; Conservative 6; Mismatches 12; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 77 LRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 136

QY 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTQVNVLLSAIRSPCORETPEGAEANPWYEPYIL 120
Db 137 QVLFSGQGPCSTHLLTHTTISRIVSYQTQVNVLLSAIRSPCORETPEGAEANPWYEPYIL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157

RESULT 2
S22052
tumor necrosis factor alpha precursor - baboon

A:Title: Molecular cloning and expression of human tumor necrosis factor and comparison
A:Reference number: I53111; MUID:86030296; PMID:3932069
A:Accession: I53111
A:Status: translated from GB/EMBL/DBDJ
A:Molecule type: DNA
A:Residues: 1-233 <MAR>
A:Cross-references: UNIPARC:UPI0000000745; GB:M26331; NID:G339763; PIDN:AAA36758.1; PID:
R:Sanjanwala, M.; Edwards, A.
A:Description: Baboon Tumor Necrosis Factor Derived from Sequences of Genomic DNA.
A:Reference number: S22052
A:Accession: S22052
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-233 <SAN>
A:Cross-references: UNIPROT:P33620; UNIPARC:UPI00001370C4; EMBL:XG2141; NID:G38159; PIDN:
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 95.7%; Score 779; DB 1; Length 233;
Best Local Similarity 96.2%; Pred. No. 4.9e-72;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
Db 77 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 136

QY 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTQVNVLLSAIRSPCORETPEGAEANPWYEPYIL 120
Db 137 QVLFSGQGPCSTHLLTHTTISRIVSYQTQVNVLLSAIRSPCORETPEGAEANPWYEPYIL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
Db 197 GGVFQLEKGRDLSAEINRPDYLDFAESGVYFGIIAL 233

RESULT 2
S22052
tumor necrosis factor alpha precursor - baboon

F:33/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:97-129/Disulfide bonds: #status predicted

Query Match 77.5%; Score 631; DB 2; Length 185;
Best Local Similarity 77.7%; Pred. No. 4.9e-57;
Matches 122; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 29 LRSSSQASNNKPVAVVADINSPGQLRWWDVSANALMANGVKLEDNLQVVPADGLYLIYS 88

QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYPIYL 120
DB 89 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCHRETPWEAKPWYPIYQ 148

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 149 GGVFQLEKGDRLSAEINLPDYLDYAESGQVYFGIIAL 185

RESULT 9
S24642
tumor necrosis factor alpha precursor - bovine
C:Species: Bos primigenius taurus (cattle)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: I46047; S24642
R:Cluade, I.; Cleuter, Y.; Kettmann, R.; Burny, A.; Droogmans, L.
Cytokine 5, 336-341, 1993
A:Title: Cloning and characterization of the tandemly arranged bovine lymphotoxin and tu
A:Reference number: I46046; MUID:94083525; PMID:8260599
A:Accession: I46047
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-233 <CL2>
A:Cross-references: UNIPROT:Q06599; UNIPARC:UPI0000137088; EMBL:Z14137; NID:g796; PIDN:C
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 77.5%; Score 631; DB 1; Length 233;
Best Local Similarity 77.7%; Pred. No. 6.6e-57;
Matches 122; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 77 LRSSSQASNNKPVAVVADINSPGQLRWWDVSANALMANGVKLEDNLQVVPADGLYLIYS 136

QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYPIYL 120
DB 137 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCHRETPWEAKPWYPIYQ 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 197 GGVFQLEKGDRLSAEINLPDYLDYAESGQVYFGIIAL 233

RESULT 10
JH0529
tumor necrosis factor alpha precursor - sheep
N:Alternate names: cachectin; TNF alpha
C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: JH0529; S4818; S13114; S20661
R:Green, I.R.; Sargan, D.R.
Gene 109, 203-210, 1991
A:Title: Sequence of the cDNA encoding ovine tumor necrosis factor-alpha: problems with
A:Reference number: JH0529; MUID:92112044; PMID:1765267
A:Accession: JH0529

A:Molecule type: mRNA
A:Residues: 1-234 <GRE>
A:Cross-references: UNIPROT:P23383; UNIPARC:UPI000002CD39; EMBL:X55152; NID:g1405; PIDN
A:Experimental source: alveolar macrophage
R:Nash, A.D.; Barcham, G.J.; Brannon, M.R.; Andrews, A.B.
Immunol. Cell Biol. 69, 273-283, 1991
A:Title: Molecular cloning, expression and characterization of ovine TNF-alpha.
A:Reference number: S48118; MUID:92155784; PMID:1786996
A:Accession: S48118
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-234 <NAS>
A:Cross-references: UNIPARC:UPI000002CD39; EMBL:X56756; NID:g297806; PIDN:CAA40076.1; P
R:Young, A.J.; Hay, J.B.; Chan, J.Y.C.
Nucleic Acids Res. 18, 6723, 1990
A:Title: Primary structure of ovine tumor necrosis factor alpha cDNA.
A:Reference number: S13114; MUID:91067496; PMID:2251151
A:Accession: S13114
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-62,64-234 <YOU>
A:Cross-references: UNIPARC:UPI000016C4EC; EMBL:X55966; NID:g1403; PIDN:CAA39437.1; PID
A:Note: comparison with the introns of homologous sequences suggest that this is probabl
C:Superfamily: tumor necrosis factor
C:Keywords: alternative splicing; cytokine; cytotoxin; glycoprotein; lipoprotein; lymph
F:1-77/Domain: propeptide #status predicted <PRO>
F:78-234/Product: tumor necrosis factor alpha #status predicted <TUM>
F:20/Binding site: myristate (Lys) (covalent) #status predicted
F:82/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:96/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:146-178/Disulfide bonds: #status predicted

Query Match 77.3%; Score 629; DB 1; Length 234;
Best Local Similarity 77.7%; Pred. No. 1.1e-56;
Matches 122; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 78 LRSSSQASNNKPVAVVADINSPGQLRWWDVSANALMANGVKLEDNLQVVPADGLYLIYS 137

QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYPIYL 120
DB 138 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTPVNLLSAIRSPCHRETPWEAKPWYPIYQ 197

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 198 GGVFQLEKGDRLSAEINLPDYLDYAESGQVYFGIIAL 234

RESULT 11
I54490
tumor necrosis factor alpha precursor - white-footed mouse
C:Species: Peromyscus leucopus (white-footed mouse)
C:Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C:Accession: I54490
R:Crew, M.D.; Filipowsky, M.E.
Immunogenetics 35, 351-353, 1992
A:Title: Sequence of the tumor necrosis factor/cachectin (TNF) gene from Peromyscus leu
A:Reference number: I54490; MUID:92218012; PMID:1348497
A:Accession: I54490
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-235 <RES>
A:Cross-references: UNIPROT:P36939; UNIPARC:UPI00001370C5; GB:M59233; NID:g202506; PIDN
C:Genetics:
A:Gene: PLTNF
A:Introns: 62/3; 81/1; 97/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted
F:84/Binding site: carbohydrate (Ser) (covalent) #status predicted

Query Match 77.2%; Score 628.5; DB 2; Length 235;

Best Local Similarity 75.2%; Pred. No. 1.2e-56; Matches 118; Conservative 21; Mismatches 17; Indels 1; Gaps 1;	
QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60	
Db 80 LRSSSQSSDKPVAHVANQHVDEQELWLSRGANALLANGMDLKDNLVVPADGLYLIYS 139	
QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVASYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120	
Db 140 QVLFKGQGC-SSYVLLTHTVSRFAVSIEDKVNLLSAIKSPCKETPEGSELKPWYEPIYL 198	
QY 121 GGVFQLEPGDRLSAEINRDPYLDFAESGOVYFGIIAL 157	
Db 199 GGVFQLEKGRLLSAENVLPKYLDFAESGOVYFGVIAL 235	
RESULT 12	
S06192	
tumor necrosis factor alpha precursor - goat (fragment)	
N:Alternate names: cachectin; TNF alpha	
C:Species: Capra aegagrus hircus (domestic goat)	
C>Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 09-Jul-2004	
C:Accession: S06192; S41867	
R:Goldstein, I.M.; Henner, D.; Talhouk, A.	
submitted to the EMBL Data Library, March 1989	
A:Reference number: S06192	
A:Accession: S06192	
A:Molecule type: mRNA	
A:Residues: 1-193 <COL>	
A:Cross-references: UNIPROT:P13296; UNIPARC:UPI000016C3PD; EMBL:X14828; NID:g992; PIDN:C	
R:Rimstad, E.	
submitted to the EMBL Data Library, January 1994	
A:Reference number: S41867	
A:Accession: S41867	
A>Status: preliminary	
A:Molecule type: mRNA	
A:Residues: 36-38,'N', 40-78,'A', 80-88,'N', 90-114,'Q', 116-123,'D', 125-144,'G', 145-173,'L'	
A:Cross-references: UNIPARC:UPI000016C3PE; EMBL:X77317; NID:g452607; PIDN:CAAS4523.1; PI	
C:Superfamily: tumor necrosis factor	
C:Keywords: cytokine; cytotoxin; glycoprotein; lymphokine; macrophage; membrane protein	
F:42/Binding site: carbohydrate (Ser) (covalent) #status predicted	
F:106-138/Diulfide bonds: #status predicted	
Query Match 76.7%; Score 624.5; DB 2; Length 193;	
Best Local Similarity 78.3%; Pred. No. 2.4e-56;	
Matches 123; Conservative 14; Mismatches 19; Indels 1; Gaps 1;	
QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60	
Db 38 LRSSSQSSNKPVAHVANISAPGQLRWGDSYANALKANGVELKDNLVVPDGLYLIYS 97	
QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVASYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120	
Db 98 QVLFRGHGCPSPTFLTHTTISRIVASYQTKVNLISAIRSPCHRETP-EEAKPWYEPIYQ 156	
QY 121 GGVFQLEPGDRLSAEINRDPYLDFAESGOVYFGIIAL 157	
Db 157 GGVFQLEKGRLLSAENVLPKYLDFAESGOVYFGIIAL 193	
RESULT 13	
JU0029	
tumor necrosis factor alpha precursor - rat	
N:Alternate names: cachectin; TNF alpha	
C:Species: Rattus norvegicus (Norway rat)	
C>Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 09-Jul-2004	
C:Accession: JU0029; JN0868; S21674	
R:Shirai, T.; Shimizu, N.; Horiguchi, S.; Ito, H.	
Agric. Biol. Chem. 53, 1733-1736, 1989	
A:Title: Cloning and expression in Escherichia coli of the gene for rat tumor necrosis f	
A:Reference number: JU0029	
A:Accession: JU0029	
A:Introns: 25/3; 61/1	
A:Molecule type: DNA	

A:Residues: 1-235 <SH1>	
A:Cross-references: UNIPROT:P16599; UNIPARC:UPI000004368F	
R:Kwon, J.; Chung, I.Y.; Benveniste, E.N.	
Gene 132, 227-236, 1993	
A:Title: Cloning and sequence analysis of the rat tumor necrosis factor-encoding genes.	
A:Reference number: JN0868; MUID:94040766; PMID:8224868	
A:Accession: JN0868	
A:Molecule type: DNA	
A:Residues: 1-235 <KWO>	
A:Cross-references: UNIPARC:UPI000004368F; GB:L00981; NID:g205253; PIDN:AAA16275.1; PID:	
R:Estler, H.C.; Grewe, M.; Gauselling, R.; Pavlovic, M.; Decker, K.	
Biol. Chem. Hoppe-Seyler 373, 271-281, 1992	
A:Title: Rat tumor necrosis factor-alpha. Transcription in rat Kupffer cells and in vitr	
A:Reference number: S21674; MUID:92329007; PMID:1627266	
A:Accession: S21674	
A:Molecule type: mRNA	
A:Residues: 1-38,'P', 40-162,'T', 164-201,'S', 203-235 <EST>	
A:Cross-references: UNIPARC:UPI000017086D; GB:X66539; GB:S40199; NID:g395369; PIDN:CAA47	
C:Comment: Tumor necrosis factor is secreted by macrophages in response to endotoxin and	
C:Genetics:	
A:Gene: TNF-alpha	
A:Introns: 62/3; 81/1; 97/1	
C:Superfamily: tumor necrosis factor	
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; mem	
F:80-235/Product: tumor necrosis factor #status predicted <MAT>	
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted	
F:84/Binding site: carbohydrate (Ser) (covalent) #status predicted	
F:86/Binding site: carbohydrate (Asn) (covalent) #status predicted	
F:148-179/Diulfide bonds: #status predicted	
Query Match 76.1%; Score 619.5; DB 2; Length 235;	
Best Local Similarity 74.5%; Pred. No. 9.9e-56;	
Matches 117; Conservative 20; Mismatches 19; Indels 1; Gaps 1;	
QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60	
Db 80 LRSSSQSSDKPVAHVANQHVDEQELWLSRGANALLANGMDLKDNLVVPADGLYLIYS 139	
QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVASYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120	
Db 140 QVLFKGQCCPD-YVLLTHTVSRFAISYQEKVLSLSAIRSPCKDTPEGAEALKPWYEPMYL 198	
QY 121 GGVFQLEPGDRLSAEINRDPYLDFAESGOVYFGIIAL 157	
Db 199 GGVFQLEKGRLLSAENVLPKYLDFITESGOVYFGVIAL 235	
RESULT 14	
JH0309	
tumor necrosis factor beta precursor - rabbit	
N:Alternate names: lymphotoxin; TNF beta	
C:Species: Oryctolagus cuniculus (domestic rabbit)	
C>Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004	
C:Accession: JH0309; PNU098	
R:Shakhov, A.N.; Kuprash, D.V.; Azizov, M.M.; Jongeneel, C.V.; Nedospasov, S.A.	
Gene 95, 215-221, 1990	
A:Title: Structural analysis of the rabbit TNF locus, containing the genes encoding TNF-	
A:Reference number: JH0309; MUID:91065534; PMID:2249779	
A:Accession: JH0309	
A:Molecule type: DNA	
A:Residues: 1-197 <SH2>	
A:Cross-references: UNIPROT:P10154; UNIPARC:UPI00001370CE; GB:M60340; GB:M35326; NID:g16	
R:Shakhov, A.N.; Kuprash, D.V.; Turetskaya, R.L.; Azizov, M.M.; Andreyeva, A.V.; Nedospa	
Mol. Biol. (Mosk.) 23, 1743-1750, 1989	
A:Title: Cloning and structural analysis of the genes, coding for rabbit tumor necrosis	
A:Reference number: PNU098; MUID:90220566; PMID:2633043	
A:Accession: PNU098	
A:Molecule type: mRNA	
A:Residues: 1-197 <SHA>	
A:Cross-references: UNIPARC:UPI00001370CE; GB:X55745; NID:g297167; PIDN:CAA39275.1; PID:	
C:Genetics:	
A:Introns: 25/3; 61/1	
C:Superfamily: tumor necrosis factor	

C;Keywords: cytokine; cytotoxin; glycoprotein; lymphokine; macrophage
F;1-26/Domain: signal sequence #status predicted <SIG>
F;27-197/Product: lymphotoxin #status predicted <MAT>

Query Match 31.8%; Score 258.5; DB 1; Length 197;
Best Local Similarity 40.0%; Pred. No. 6.4e-19;
Matches 60; Conservative 21; Mismatches 58; Indels 11; Gaps 4;

QY 12 EVAHVANPQAEQQLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFSGGCGCP- 70
Db 55 PAAHLVGDPSAQDSLRRANTDRAFLRHGFSLSNNLLVPSSGLYFYVYSQVWFSGGCGSP 114

QY 71 ---STHVLTLHTISRIAVSYQTPVNLLSAIRSPCQRETPGAEANPWYEPYILGGVFOLE 127
Db 115 KAVPTPLYLAEVQLFSSQYSHVPLLSAQKVC--PGPQG----PWVRSVYQGAVALFLT 168

QY 128 PGDRLSAEINRPDYLDPAESGGQYVFGIALL 157
Db 169 QGDQLSTHTDGIHALLSPS-SVFFGAFAL 197

RESULT 15
S24641
lymphotoxin - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: I46046; S24641
R;Clutds, I.; Cleuter, Y.; Kettmann, R.; Burny, A.; Droogmans, L.
Cytokine 5, 336-341, 1993
A;Title: Cloning and characterization of the tandemly arranged bovine lymphotoxin and tu
A;Reference number: I46046; MUID:94083525; PMID:8260599
A;Accession: I46046
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-204 <Cl2>
C;Cross-references: UNIPROT:Q06600; UNIPARC:UPI00001370CA; EMBL:Z14137; NID:g796; PIDN:Q
C;Genetics:
A;Introns: 32/3; 68/1
C;Superfamily: tumor necrosis factor

Query Match 30.8%; Score 250.5; DB 1; Length 204;
Best Local Similarity 38.7%; Pred. No. 4.4e-18;
Matches 58; Conservative 22; Mismatches 59; Indels 11; Gaps 4;

QY 12 EVAHVANPQAEQQLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFSGGCGC-- 69
Db 62 PAAHLVGDPSAQDSLRRANTDRAFLRHGFSLSNNLLVPSSGLYFYVYSQVWFSGGCGCP 121

QY 70 --PSTHVLTLHTISRIAVSYQTPVNLLSAIRSPCQRETPGAEANPWYEPYILGGVFOLE 127
Db 122 RATPTPLYLAEVQLFSPQYFHVPLLSAQKVC--PGPQG----PWVRSVYQGAVALFLT 175

QY 128 PGDRLSAEINRPDYLDPAESGGQYVFGIALL 157
Db 176 RGQQLSTHTDGIHALLSPS-SVFFGAFAL 204

Search completed: May 5, 2006, 11:27:50
Job time : 18 secs

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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:53 ; Search time 53.5 seconds
(without alignments)
2070.429 Million cell updates/sec

Title: US-10-668-178-13

Perfect score: 814

Sequence: 1 VRSSRTSPDMVAHVWNP.....RPDYLDFAESGVYFGIALL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Uniprot_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	779	95.7	233	1	TNFA_HUMAN
2	779	95.7	233	2	Q55TB3_HUMAN
3	772	94.8	233	1	TNFA_PASP
4	770	94.6	232	1	TNFA_PANTR
5	761	93.5	233	1	TNFA_MACMU
6	758	93.1	233	1	TNFA_MACFA
7	757	93.0	233	1	TNFA_PAPHU
8	754	92.6	233	1	TNFA_PAPAN
9	744	91.4	149	2	Q97543_AOTNA
10	738	90.7	233	1	TNFA_CANFA
11	731	89.8	233	1	TNFA_FELCA
12	708	87.0	233	1	TNFA_SAISC
13	702	86.2	149	2	Q97538_AOTVO
14	702	86.2	149	2	Q97TG8_AOTNI
15	697	85.6	234	1	TNFA_HORSE
16	691	84.9	217	2	Q9BBG0_CYCBI
17	687	84.4	217	2	Q9BBG1_BRATR
18	679	83.4	233	1	TNFA_DELLE
19	677	83.2	232	1	TNFA_PIG
20	661	81.2	233	1	TNFA_TURTR
21	652	80.1	217	2	Q9BBF4_CABUN
22	649	79.7	138	2	Q9TTG7_AOTLE
23	641	78.7	234	1	TNFA_CAPHI
24	638	78.4	234	2	Q53ZM5_CAPHI
25	637	78.3	234	1	TNFA_CAVPO
26	635	78.0	216	2	Q9BBE4_TALEU
27	634.5	77.9	235	1	TNFA_MOUSE
28	633.5	77.8	235	1	TNFA_RABIT
29	633	77.8	234	2	Q539C2_TUPTA
30	632	77.6	229	1	TNFA_CEREL
31	631	77.5	233	1	TNFA_BOVIN

32	631	77.5	233	1	TNFA_BUBBU	P59693 bubalus bub
33	631	77.5	234	1	TNFA_BOSIN	P59684 bos indicus
34	629	77.3	234	1	TNFA_SHEEP	P23383 ovis aries
35	628.5	77.2	235	1	TNFA_PERLE	P36939 peromyscus
36	623.5	76.6	235	2	Q5W9H9_MERUN	Q5W9H9 meriones un
37	622.5	76.5	232	2	Q80XA4_PERMA	Q80XA4 peromyscus
38	619.5	76.1	235	1	TNFA_RAT	P16599 rattus norv
39	619.5	76.1	235	2	Q6EE11_RAT	Q6EE11 rattus norv
40	617	75.8	233	1	TNFA_CAMBA	Q75N23 camelus bac
41	617	75.8	233	1	TNFA_LAMGL	P59694 lama glama
42	611.5	75.1	156	2	Q91ZL4_SIGHI	Q91ZL4 sigmodon hi
43	604.5	74.3	233	1	TNFA_MARMO	Q35734 marmota mon
44	604.5	74.3	233	2	Q6X658_MARMO	Q6X658 marmota mon
45	601.5	73.9	216	2	Q9BEC9_OCHPR	Q9BEC9 ochotona pr

ALIGNMENTS

RESULT 1
ID TNFA_HUMAN STANDARD; PRT; 233 AA.
AC P01375; O43647; Q9P1Q2; Q9UIV3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSP2;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87217060; PubMed=3555974;
RA Nedopasov S.A., Shakhov A.N., Turetskaya R.L., Mett V.A.,
RA Azizov M.M., Georgiev G.P., Korobko V.G., Dobrynin V.N.,
RA Filippov S.A., Bystrov N.S., Boldyreva E.P., Chuvpilo S.A.,
RA Chumakov A.M., Shingirova L.N., Ovchinnikov Y.A.;
RT "Random arrangement of genes coding for tumor necrosis factor (TNF-
alpha) and lymphotoxin (TNF-beta) in the human genome.";
Cold Spring Harb. Symp. Quant. Biol. 51:611-624(1986).
[2]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=85086244; PubMed=6392892;
RA Pennica D., Nedwin G.E., Hayflick J.S., Seeburg P.H., Derynck R.,
RA Palladino M.A., Kohr W.J., Aggarwal B.B., Goeddel D.V.;
RT "Human tumour necrosis factor: precursor structure, expression and
homology to lymphotoxin.";
Nature 312:724-729(1984).
[3]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=85137898; PubMed=3883195;
RA Shirai T., Yamaguchi H., Ito H., Todd C.W., Wallace R.B.;
RT "Cloning and expression in Escherichia coli of the gene for human
tumour necrosis factor.";
Nature 313:803-806(1985).
[4]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=86016093; PubMed=2995927;
RA Nedwin G.E., Naylor S.L., Sakaguchi A.Y., Smith D.H.,
RA Jarrett-Nedwin J., Pennica D., Goeddel D.V., Gray P.W.;
RT "Human lymphotoxin and tumor necrosis factor genes: structure,
homology and chromosomal localization.";
Nucleic Acids Res. 13:6361-6373(1985).
[5]
RP NUCLEOTIDE SEQUENCE.
MEDLINE=85142190; PubMed=3856324;
RA Wang A.M., Cressey A.A., Ladner M.B., Lin L.S., Strickler J.,
RA van Arsdel J.N., Yamamoto R., Mark D.F.;

RT "Molecular cloning of the complementary DNA for human tumor necrosis factor."; Science 228:149-154(1985).
RN [6]
RX MEDLINE=86030296; PubMed=3932069;
RA Marnenout A., Fransen L., Tavernier J., van der Heyden J., Tizard R., Kawashina E., Shaw A., Johnson M.J., Semon D., Mueller R., Ruysschaert M.K., van Vliet A., Fiers W.;
RT "Molecular cloning and expression of human tumor necrosis factor and comparison with mouse tumor necrosis factor.";
RN Eur. J. Biochem. 152:515-522(1985).
RN [7]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=93272029; PubMed=8499947;
RA Iris F.J.M., Bougueleret L., Prieur S., Caterina D., Primas G., Perrot V., Jurka J., Rodriguez-Tome P., Claverie J.-M., Dausset J., Cohen D.;
RT "Dense Alu clustering and a potential new member of the NF kappa B family within a 90 kilobase HLA class III segment.";
RN Nat. Genet. 3:137-145(1993).
RN [8]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=99218514; PubMed=10202016;
RA Neville M.J., Campbell R.D.;
RT "A new member of the Ig superfamily and a V-ATPase G subunit are among the predicted products of novel genes close to the TNF locus in the human MHC.";
RN J. Immunol. 162:4745-4754(1999).
RN [9]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX PubMed=14656967; DOI=10.1101/gr.1736803;
RA Xie T., Rowen L., Aguado B., Ahern M.E., Madan A., Qin S., Campbell R.D., Hood L.;
RT "Analysis of the gene-dense major histocompatibility complex class III region and its comparison to mouse.";
RN Genome Res. 13:2621-2636(2003).
RN [10]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RA Shiina S., Tamiya G., Oka A., Inoko H.;
RT "Homo sapiens 2,229,817bp genomic DNA of 6p21.3 HLA class I region.";
RN Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.
RN [11]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RA Shiina T., Ota M., Katsuyama Y., Hashimoto N., Inoko H.;
RT "Genome diversity in HLA: a new strategy for detection of genetic polymorphisms in expressed genes within the HLA class III and class I regions.";
RN Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
RN [12]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RA Rieder M.J., Carrington D.P., Chung M.-W., Lee K.L., Poel C.L., Yi Q., Nickerson D.A.;
RT "SeattleSNPs: a program for genomic applications, UW-FHCRC, Seattle, WA (URL: <http://pga.gs.washington.edu>).";
RN Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.
RN [13]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA], AND VARIANT LEU-84.
RA Rieder M.J., Livingston R.J., Daniels M.R., Montoya M.A., Chung M.-W., Miyamoto K.E., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Witrak L.A., Nickerson D.A.;
RT "NIHES-SNPs, environmental genome project, NIHES ES15478, Department of Genome Sciences, Seattle, WA (URL: <http://egp.gs.washington.edu>).";
RN Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
RN [14]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RC TISSUE=Blood.
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalios D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
RN Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [15]
RP NUCLEOTIDE SEQUENCE OF 77-233.
RA Jang J.S., Kim B.E.;
RN Submitted (JAN-1998) to the EMBL/GenBank/DBJ databases.
RN [16]
RP NUCLEOTIDE SEQUENCE OF 84-214.
RC TISSUE=Prostatic carcinoma;
RA Shao C., Yan W., Zhu F., Yue W., Chai Y., Zhao Z., Wang C.;
RN Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.
RN [17]
RP PHOSPHORYLATION (MEMBRANE FORM).
RX MEDLINE=96170872; PubMed=8597870;
RA Pocsik E., Duda E., Wallach D.;
RT "Phosphorylation of the 26 kDa TNF precursor in monocytic cells and in transfected HeLa cells.";
RN J. Inflamm. 45:152-160(1995).
RN [18]
RP PHOSPHORYLATION BY CK1, AND DEPHOSPHORYLATION.
RX MEDLINE=99221647; PubMed=10205166; DOI=10.1093/emboj/18.8.2119;
RA Watts A.D., Hunt N.H., Wanigasekara Y., Bloomfield G., Wallach D., Roufogalis B.D., Chaudhri G.;
RT "A casein kinase I motif present in the cytoplasmic domain of members of the tumour necrosis factor ligand family is implicated in 'reverse signalling'.";
RN EMBO J. 18:2119-2126(1999).
RN [19]
RP MUTAGENESIS.
RX MEDLINE=91184128; PubMed=2009860;
RA Oscade X.V., Tavernier J., Prange T., Fiers W.;
RT "Localization of the active site of human tumour necrosis factor (hTNF) by mutational analysis.";
RN EMBO J. 10:827-836(1991).
RN [20]
RP MYRISTOYLATION.
RX MEDLINE=93018820; PubMed=1402651; DOI=10.1084/jem.176.4.1053;
RA Stevenson F.T., Bursten S.L., Locksley R.M., Lovett D.H.;
RT "Myristyl acylation of the tumor necrosis factor alpha precursor on specific lysine residues.";
RN J. Exp. Med. 176:1053-1062(1992).
RN [21]
RP CLEAVAGE BY ADAM17.
RX MEDLINE=97186575; PubMed=9034191;
RA Moss M.L., Jin S.-L.C., Milla M.E., Burkhardt W., Carter H.L., Chen W.-J., Clay W.C., Didsbury J.R., Haessler D., Hoffman C.R., Kost T.A., Lambert M.H., Leesnitzer M.A., McCauley P., McGeehan G., Mitchell J., Moyer M., Pabel G., Rocque W., Overton L.K., Schoenen P., Seaton T., Su J.-L., Warner J., Willard D., Becherer J.D.;
RT "Cloning of a disintegrin metalloproteinase that processes precursor tumour-necrosis factor-alpha.";
RN Nature 385:733-736(1997).
RN [22]
RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).
RX MEDLINE=89159409; PubMed=2922050; DOI=10.1038/338225a0;
RA Jones E.Y., Stuart D.I., Walker N.P.;
RT "Structure of tumour necrosis factor.";
RN Nature 338:225-228(1989).
RN [23]
RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).


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SQ SEQUENCE 233 AA; 25557 MW; 455360B48DC74173 CRC64;
Query Match 94.8%; Score 772; DB 1; Length 233;
Best Local Similarity 95.5%; Pred. No. 1.3e-69;
Matches 150; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLYS 60
Db 77 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLYS 136

QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYIL 120
Db 137 QVLFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYIL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 197 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 233

RESULT 4
TNFA_PANTR
ID TNFA_PANTR STANDARD; PRT; 232 AA.
AC Q8HZD9;
DT 10-OCT-2003 (Rel. 42, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Pan troglodytes (Chimpanzee).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Pan.
OX NCBI_TaxID=9598;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22381002; PubMed=12493009;
RX DOI=10.1034/j.1600-065X.2002.19008.x;
RA Kuleki J.K., Shiina T., Anzai T., Kohara S., Inoko H.;
RA "Comparative genomic analysis of the MHC: the evolution of class I
RT duplication blocks, diversity and complexity from shark to man.";
RL Immunol. Rev. 190:95-122(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX MEDLINE=22709134; PubMed=12799463; DOI=10.1073/pnas.1230533100;
RA Anzai T., Shiina T., Kimura N., Yanagiya K., Kohara S., Shigenari A.,
RA Yamagata T., Kuleki J.K., Naruse T.K., Fujimori Y., Fukuzumi Y.,
RA Yamazaki M., Tashiro H., Imamoto C., Umehara Y., Imanishi T.,
RA Meyer A., Ikeo K., Gojobori T., Bahram S., Inoko H.;
RT "Comparative sequencing of human and chimpanzee MHC class I regions
RT unveils insertions/deletions as the major path to genomic
RT divergence.";
RL Proc. Natl. Acad. Sci. U.S.A. 100:7708-7713(2003).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 33-186.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RT specific characteristics.";
RL Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR2. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation (By similarity).
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
```

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CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; AB054536; BAB3882.1; -; Genomic DNA.
CC EMBL; BA000041; BAC78157.1; -; Genomic DNA.
CC EMBL; AY091964; AAM76582.1; -; Genomic DNA.
CC HSSP; P01375; 4TSV.
CC SMR; Q8HZD9; 81-232.
CC InterPro; IPR006053; TNF abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNECROSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD02012; TNF_subf; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS00049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 232
FT Tumor necrosis factor, membrane form (By
FT similarity).
FT CHAIN 77 232
FT Tumor necrosis factor, soluble form (By
FT similarity).
FT TOPO_DOM 1 34
FT Signal-anchor for type II membrane
FT TRANSMEM 35 57
FT protein (By similarity).
FT TOPO_DOM 58 232
FT Extracellular (Potential).
FT SITE 76 77
FT Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2
FT Phosphoserine (by CK1) (By similarity).
FT DISULFID 144 176
FT By similarity.
FT CONFLICT 77 77
FT G -> VR (in Ref. 3).
SQ SEQUENCE 232 AA; 25446 MW; E4D71B19C6AE0D03 CRC64;
Query Match 94.6%; Score 770; DB 1; Length 232;
Best Local Similarity 96.1%; Pred. No. 2e-69;
Matches 149; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 3 SSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLYSQV 62
Db 78 SSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLYSQV 137

QY 63 LFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYILGG 122
Db 138 LFSGQGCPSHTVLLTHTISRIASVYQTPVNLLSAIRSPCQRETPGAEANPWYEPYILGG 197

QY 123 VFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 198 VFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 232

RESULT 5
TNFA_MACMU
ID TNFA_MACMU STANDARD; PRT; 233 AA.
AC P48094; Q5TM11; Q8HZD6;
DT 01-FEB-1996 (Rel. 33, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini;
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OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
RN NUCLEOTIDE SEQUENCE [MRNA].
RP MEDLINE=96003435; PubMed=7561102;
RX Villing F.J., Brar S.A., Mayne A.E., Chikkala N., Ansari A.A.;
RT "Comparative sequence analysis of cytokine genes from human and
RL nonhuman primates.";
RN J. Immunol. 155:3946-3954 (1995).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX PubMed=15269276; DOI=10.1093/molbev/msh216;
RA Kulski J.K., Anzai T., Shihina T., Inoko H.;
RT "Rhesus macaque class I duplicon structures, organization, and
RN evolution within the alpha block of the major histocompatibility
complex.";
RL Mol. Biol. Evol. 21:2079-2091 (2004).
RN [3]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA] OF 33-187.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RN specific characteristics.";
RL Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; U19850; AA086712.1; -; mRNA.
CC EMBL; AB128049; BAD69724.1; -; Genomic DNA.
CC EMBL; AY091967; AM76585.1; -; Genomic DNA.
CC HSSP; P01375; 4TSV.
CC SMR; P48094; 82-233.
CC InterPro; IPR006053; TNF_abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC PANTHER; PTHR11471:SP4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNECROSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD002012; TNF_subf; 1.
CC SMART; SM00207; TNF; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS0049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233 Tumor necrosis factor, membrane form.
FT CHAIN 77 233 Tumor necrosis factor, soluble form.
FT TOPO_DOM 1 35 Cytoplasmic (Potential).
FT TRANSMEM 36 56 Signal-anchor for type II membrane
FT protein (Potential).
FT TOPO_DOM 57 233 Extracellular (Potential).
FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT -----

FT DISULFID 145 177 By similarity.
SQ SEQUENCE 233 AA; 25630 MW; 9P6F85050595FD59 CRC64;
Query Match 93.5%; Score 761; DB 1; Length 233;
Best Local Similarity 94.3%; Pred. No. 1.7e-68;
Matches 148; Conservative 1; Mismatches 8; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAGQLQWLNRRANALLANGVELDNQVVPSEGLYLIYS 60
DB 77 VRSSRTPSDMPVAHVANPQAGQLQWLNRRANALLANGVELDNQVVPSEGLYLIYS 136
QY 61 QVLFSGQCPSTHVLTHITISRIAYSYQTPVNLISAISSPCORETPEGAEANPWYEPYL 120
DB 137 QVLFSGQCPSTHVLTHITISRIAYSYQTPVNLISAISSPCORETPEGAEANPWYEPYL 196
QY 121 GGVFQLEPGDRLSABINRPDYLDPAESGVYFGIIAL 157
DB 197 GGVFQLEKGRDLSABINRPDYLDPAESGVYFGIIAL 233

RESULT 6
TNFA_MACFA
ID TNFA_MACFA STANDARD; PRT; 233 AA.
AC P79337;
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 15-JUL-1998 (Rel. 36, Last annotation update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
DE Name=TNF; Synonyms=TNFA, TNFSF2;
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9541;
RN NUCLEOTIDE SEQUENCE [MRNA].
RC TISSUE=Lymphocyte;
RA Tatum M.;
RT "Molecular cloning and expression of cynomolgus monkey TNF-alpha.";
RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; AB000513; BAA119131.1; -; mRNA.
CC HSSP; P01375; 4TSV.
CC SMR; P79337; 82-233.
CC InterPro; IPR006053; TNF_abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC PANTHER; PTHR11471:SP4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNECROSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD002012; TNF_subf; 1.
CC SMART; SM00207; TNF; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS0049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233 Tumor necrosis factor, membrane form.
FT CHAIN 77 233 Tumor necrosis factor, soluble form.
FT TOPO_DOM 1 35 Cytoplasmic (Potential).
FT TRANSMEM 36 56 Signal-anchor for type II membrane
FT protein (Potential).
FT TOPO_DOM 57 233 Extracellular (Potential).
FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT -----
```

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DR PANTHER: PTHR11471:SF4; TNF_alpha; 1.
DR Pfam: PF00229; TNF; 1.
DR PRINTS: PRO1234; TNECROSISFCT.
DR PRINTS: PRO1235; TNFALPHA.
DR ProDom: PD002012; TNF subf; 1.
DR SMART: SM00207; TNF; 1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS50049; TNF_2; 1.
DR Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
KW CHAIN 1 233
FT CHAIN 1 233
FT TOPO_DOM 1 35
FT TOPO_DOM 36 56
FT TRANSMEM 36 56
FT TOPO_DOM 57 233
FT SITE 76 77
FT MOD_RES 2 2
FT DISULFID 145 177
SQ SEQUENCE 233 AA; 25558 MW; 6ABP2C3AB132C217 CRC64;

Query Match 93.1%; Score 759; DB 1; Length 233;
Best Local Similarity 93.6%; Pred. No. 3.3e-68;
Matches 147; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVWPSEGGLYIYS 60
DB 77 VRSSRTSPDKPVVHVANPQAEQQLWLNRRANALLANGVELTDNLQVWPSEGGLYIYS 136
QY 61 QVLFSGQGCPSHVLTLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAENPWPYEPIYL 120
DB 137 QVLFKGQGCPSNHVLLTHTISRIAVSYQTKVNLLSAIRSPCQRETPEGAENPWPYEPIYL 196
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
DB 197 GGVFQLEKGDRLSABINLPDYLDFAESGVYFGIIAL 233

RESULT 7
TNFA_PAPHU STANDARD; PRT; 233 AA.
ID TNFA_PAPHU STANDARD; PRT; 233 AA.
AC 07510;
DT 15-DEC-1998 (Rel. 37, Created)
DT 15-DEC-1998 (Rel. 37, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Papio hamadryas ursinus (Chacma baboon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopitheciniae; Papio.
OX NCBI_TaxID=36229;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RX MEDLINE=98147379; PubMed=9488055; DOI=10.1016/S0161-5890(97)00124-7;
RA Haudek S.B., Redl H., Schleg G., Giroir B.P.;
RT "Complementary DNA (cDNA) sequence of baboon tumor necrosis factor
RT alpha."
RL Mol. Immunol. 34:1041-1042(1997).
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is

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phosphorylated on serine residues. Dephosphorylation of the
membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
similarity).
-!- SIMILARITY: Belongs to the tumor necrosis factor family.
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between the Swiss Institute of Bioinformatics and the EMBL Outstation -
the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
EMBL: AF019963; AAC31675.1; -; mRNA.
HSSP: P01375; 4TSV.
SMR: O77510; 82-233.
InterPro: IPR006053; TNF_abc.
InterPro: IPR002959; TNF_alpha.
InterPro: IPR006052; TNF_family.
InterPro: IPR003636; TNF_subf.
PANTHER: PTHR11471:SF4; TNF_alpha; 1.
Pfam: PF00229; TNF; 1.
PRINTS: PRO1234; TNECROSISFCT.
PRINTS: PRO1235; TNFALPHA.
ProDom: PD002012; TNF subf; 1.
SMART: SM00207; TNF; 1.
PROSITE: PS00251; TNF_1; 1.
PROSITE: PS50049; TNF_2; 1.
Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
KW CHAIN 1 233
FT CHAIN 1 233
FT TOPO_DOM 1 35
FT TOPO_DOM 36 56
FT TOPO_DOM 57 233
FT SITE 76 77
FT MOD_RES 2 2
FT DISULFID 145 177
SQ SEQUENCE 233 AA; 25658 MW; B9403255058D4A03 CRC64;

Query Match 93.0%; Score 757; DB 1; Length 233;
Best Local Similarity 93.6%; Pred. No. 4.2e-68;
Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVWPSEGGLYIYS 60
DB 77 VRSSRTSPDKPVVHVANPQAEQQLWLNRRANALLANGVELTDNLQVWPSEGGLYIYS 136
QY 61 QVLFSGQGCPSHVLTLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAENPWPYEPIYL 120
DB 137 QVLFKGQGCPSNHVLLTHTISRIAVSYQTKVNLLSAIRSPCQRETPEGAENPWPYEPIYL 196
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
DB 197 GGVFQLEKGDRLSABINLPDYLDFAESGVYFGIIAL 233

RESULT 8
TNFA_PAPAN STANDARD; PRT; 233 AA.
ID TNFA_PAPAN STANDARD; PRT; 233 AA.
AC P59695;
DT 10-OCT-2003 (Rel. 42, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Papio anubis (Olive baboon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopitheciniae; Papio.
OX NCBI_TaxID=9555;
RN [1]
RP NUCLEOTIDE SEQUENCE.

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RX MEDLINE=21383618; PubMed=11491535; DOI=10.1007/s002510100322;
RA Villinger F.J., Bostik P., Mayne A.E., King C.L., Genain C.P.,
RA Weiss W.R., Aneari A.A.;
RT "Cloning, sequencing, and homology analysis of nonhuman primate
RL Fas/Fas-ligand and co-stimulatory molecules.";
RL Immunogenetics 53:315-328(2001).
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia, under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; AY234222; AAC08335.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; P59695; 82-233.
DR InterPro; IPR006033; TNF_abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233
FT Tumor necrosis factor, membrane form (By
FT similarity).
FT CHAIN 77 233
FT Tumor necrosis factor, soluble form (By
FT similarity).
FT TOPO_DOM 1 34
FT Signal-anchor (Potential).
FT TRANSMEM 35 57
FT protein (By similarity).
FT Extracellular (Potential).
FT TOPO_DOM 58 233
FT Cleavage (by ADAM17) (By similarity).
FT SITE 76 77
FT Phosphoserine (by CK1) (By similarity).
FT DISULFID 145 177
FT By similarity.
FT SEQUENCE 233 AA; 25736 MW; 0C477F9EB6CC9909 CRC64;
Query Match 92.6%; Score 754; DB 1; Length 233;
Best Local Similarity 93.6%; Pred. No. 8.4e-68;
Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;
QY 1 VRSSRTPSPMPVAHVAVNPQAGQQLWLNRRANALLANGVELRDNLQVLPSEGLYLIYS 60
DB 77 VRSSRTPSPDKPVAVHVAVNPQAGQQLWLNRRANALLANGVELRDNLQVLPSEGLYLIYS 136
QY 61 QVLVFSGGCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAEANPWYRPIYL 120
DB 137 QVLVFKGQGCPSNHLVLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAEAKPWYRPIYL 196
QY 121 GGVFQLEPGDRLSAEINRPDYLDFABSGQVYFGIAL 157

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DB 197 GGVFQLEKGRDLRSABINLPDYLDFABSGQVYFGIAL 233
RESULT 9
O97543 AOTNA
ID O97543 AOTNA PRELIMINARY; PRT; 149 AA.
AC O97543;
DT 01-MAY-1999 (TREMBLrel. 10, Created)
DT 01-MAY-1999 (TREMBLrel. 10, Last sequence update)
DT 01-OCT-2003 (TREMBLrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (Fragment).
GN Name=TNF-alpha;
OS Aotus nancymae (Ma's night monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Aotinae; Aotus.
OX NCBI_TaxID=37293;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
RT in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF014513; AAD01539.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; O97543; 1-149.
DR GO; GO:0016020; C-membrane; IEA.
DR GO; GO:0005164; F-tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P-immune response; IEA.
DR InterPro; IPR006053; TNF_abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON TER 1
FT NON TER 149
FT NON TER 149
SQ SEQUENCE 149 AA; 16466 MW; 3C2A6140778EFA8A CRC64;
Query Match 91.4%; Score 744; DB 2; Length 149;
Best Local Similarity 96.0%; Pred. No. 5e-67;
Matches 143; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 8 PSDMPVAHVAVNPQAGQQLWLNRRANALLANGVELRDNLQVLPSEGLYLIYSQVLFSGQ 67
DB 1 PSDKPVAHVAVNPQAGQQLWLNRRANALLANGVELRDNLQVLPSEGLYLIYSQVLFKQ 60
QY 68 GCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAEANPWYRPIYLGVPQLE 127
DB 61 GCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAEAKPWYRPIYLGVPQLE 120
QY 128 PGDRLSAEINRPDYLDFABSGQVYFGIIA 156
DB 121 KGDRLSAEINRPDYLDFABSGQVYFGIIA 149
RESULT 10
TNFA_CANFA
ID TNFA_CANFA STANDARD; PRT; 233 AA.
AC P51742; Q28339;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].

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GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Canis familiaris (Dog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
 OC Canis.
 OX NCBI_TaxID=9615;
 RN [1] _TNFOTIDE SEQUENCE [GENOMIC DNA].
 RA Fiers W.;
 RP "Tumour necrosis factor.";
 RL (in) Sim E. (eds.);
 RL The natural immune system humoral factors, pp.65-119, IRL Press,
 RL Oxford (1993).
 RN NUCLEOTIDE SEQUENCE [MRNA].
 RA Zucker K., Lu P., Fuller L., Athana D., Esquenazi V., Miller J.;
 RP "Cloning and expression of the cDNA for canine tumor necrosis factor-
 alpha in E. coli.";
 RL Lymphokine Res. 13:191-196(1994).
 RN [3].
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RA Wagner J.L., Falti Y., Didario D.D.;
 RP "Genomic map of a portion of the canine MHC class I histocompatibility
 complex.";
 RL Submitted (SEP-2003) to the EMBL/GenBank/DBJ databases.
 RN [4].
 RP NUCLEOTIDE SEQUENCE [MRNA] OF 74-205.
 RC STRAIN=Beagle; TISSUE=Blood;
 RA Gilmore W.H., Carter S.D., Bennett M., Barnes A., Kelly D.F.;
 RP "Expression of canine TNF, IL-1 and IL-6 mRNAs in peripheral blood
 monocytes and cell lines.";
 RL Submitted (MAR-1996) to the EMBL/GenBank/DBJ databases.
 CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
 CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
 CC induce cell death of certain tumor cell lines. It is potent
 CC pyrogen causing fever by direct action or by stimulation of
 CC interleukin 1 secretion and is implicated in the induction of
 CC cachexia. Under certain conditions it can stimulate cell
 CC proliferation and induce cell differentiation.
 CC -!- SUBUNIT: Homotrimer (By similarity).
 CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
 CC extracellular soluble form (By similarity).
 CC -!- PTM: The soluble form derives from the membrane form by
 CC proteolytic processing (By similarity).
 CC -!- PTM: The membrane form, but not the soluble form, is
 CC phosphorylated on serine residues. Dephosphorylation of the
 CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
 CC similarity).
 CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
 CC
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC
 CC EMBL; X94932; CAAG4403.1; -; Genomic DNA.
 CC EMBL; S74068; AAB32391.1; -; mRNA.
 CC EMBL; AY423389; AAR27885.1; -; Genomic DNA.
 CC EMBL; Z70046; CAA93908.1; -; mRNA.
 CC HSSP; P01375; 4TSV.
 CC SMR; P51742; 82-233.
 CC Ensembl; ENSCAFG0000000517; Canis familiaris.
 CC InterPro; IPR006053; TNF abc.
 CC InterPro; IPR002959; TNF alpha.
 CC InterPro; IPR006052; TNF family.
 CC InterPro; IPR003636; TNF subf.
 CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.
 CC Pfam; PF00229; TNF; 1.
 CC PRINTS; PR01234; TNCRSISFCT.
 CC PRINTS; PR01235; TNFALPHA.
 CC ProDom; PD002012; TNF subf; 1.
 CC SMART; SM00207; TNF; 1.

DR PROSITE; PS00251; TNF 1; 1.
 DR PROSITE; PS50049; TNF 2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT CHAIN 77 233
 FT TOPO DOM 1 35
 FT TRANSMEM 36 56
 FT TOPO DOM 57 233
 FT SITE 76 77
 FT MOD RES 2 2
 FT DISULFID 145 177
 FT CONFLICT 59 60
 FT CONFLICT 66 66
 FT CONFLICT 74 74
 FT CONFLICT 111 111
 FT CONFLICT 116 116
 FT CONFLICT 134 135
 SQ SEQUENCE 233 AA; 25447 MW; 7B2588FBCB25340 CRC64;
 Query Match 90.7%; Score 738; DB 1; Length 233;
 Best Local Similarity 89.8%; Pred. No. 3.5e-66;
 Matches 141; Conservative 7; Mismatches 9; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDMPVAHVANPOAEGQQLMNRANALLANGVELRDQLVVPSEGLYLYS 60
 Db 77 VKSSRTPSDMPVAHVANPOAEGQQLMNRANALLANGVELRDQLVVPSEGLYLYS 136
 QY 61 QVLFSGQCPSTHVLTHHTISRIASVYQTPVNLISAIRSPQRETPEGAEANWYEPIYL 120
 Db 137 QVLFPGQCPSTHVLTHHTISRFASVYQTKVNLISAIKSPQRETPEGTEAKPWEPIYL 196
 QY 121 GGVFQLEPGDRLSAEINRPDVLDFAESGVYFGIIL 157
 Db 137 GGVFQLEKGDRLSAEINLPNLDFAESGVYFGIIL 233
 RESULT 11
 ID TNFA FELCA STANDARD; PRT; 233 AA.
 AC P19101; Q8HYMO;
 DT 01-NOV-1990 (Rel. 16, Created)
 DT 10-OCT-2003 (Rel. 42, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Felis silvestris catus (Cat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Felidae;
 OC Felinae; Felis.
 OX NCBI_TaxID=9685;
 RN [1] _TNFOTIDE SEQUENCE.
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RC TISSUE=Blood.
 RX MEDLINE=91016860; PubMed=2216740;
 RA McGraw R.A., Coffee B.W., Otto C.M., Drews R.T., Rawlings C.A.;
 RT "Gene sequence of feline tumor necrosis factor alpha.";
 RL Nucleic Acids Res. 18:5563-5563(1990).
 RN [2].
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RC TISSUE=Bone marrow;
 RA Daniel S.L., Brenner C.A., Legendre A.M., Solomon A., Rouse B.T.;
 RT "Feline cytokines TNF alpha and IL-1 beta: PCR cloning and sequencing
 RT of cDNA.";
 RL Anim. Biotechnol. 3:117-121(1992).
 RN [3].
 RP NUCLEOTIDE SEQUENCE OF 95-185.
 RA Susott E.E., Rollo W.A., Venta P.J., Ewart S.L.;
 RT "Characterization of 8 feline type I markers.";
 RL Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.
 CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and

TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin 1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation.

CC -!- SUBUNIT: Homotrimer (By similarity).

CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an extracellular soluble form (By similarity).

CC -!- PTM: The soluble form derives from the membrane form by proteolytic processing (By similarity).

CC -!- PTM: The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By similarity).

CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.

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CC EMBL; X54000; CAA37948.1; -; Genomic DNA.

CC EMBL; M92061; AAA30818.1; -; mRNA.

CC EMBL; AF459810; AAO15590.1; -; Genomic DNA.

CC PIR; S11688; S11688.

CC HSSP; P01375; 4TSV.

CC SMR; P19101; 82-233.

CC InterPro; IPR006053; TNF abc.

CC InterPro; IPR002959; TNF alpha.

CC InterPro; IPR006052; TNF family.

CC InterPro; IPR003636; TNF_subf.

CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.

CC Pfam; PF00229; TNF; 1.

CC PRINTS; PR01234; TNECROSISFCT.

CC PRINTS; PR01235; TNFALPHA.

CC ProDom; PD002012; TNF_subf; 1.

CC SMART; SM00207; TNF; 1.

CC PROSITE; PS00251; TNF_1; 1.

CC PROSITE; PS0049; TNF_2; 1.

CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.

CC CHAIN 1 233 Tumor necrosis factor, membrane form.

CC CHAIN 77 233 Tumor necrosis factor, soluble form.

CC TOPO_DOM 1 35 Cytoplasmic (Potential).

CC TRANSMEM 36 56 Signal-anchor for type II membrane protein (Potential).

CC TOPO_DOM 57 233 Extracellular (Potential).

CC SITE 76 77 Cleavage (by ADAM17) (By similarity).

CC MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).

CC DISULFID 145 177 By similarity.

CC CONFLICT 28 28 G -> R (in Ref. 2).

CC CONFLICT 104 104 W -> R (in Ref. 1).

CC CONFLICT 141 141 T -> K (in Ref. 3).

CC CONFLICT 151 151 L -> H (in Ref. 2).

CC CONFLICT 155 155 T -> A (in Ref. 1).

CC CONFLICT 210 210 T -> A (in Ref. 2).

CC SEQUENCE 233 AA; 25382 MW; 03E51823A7863510 CRC64;

Query Match 89.8%; Score 731; DB 1; Length 233;

Best Local Similarity 89.8%; Pred. No. 1.8e-65;

Matches 141; Conservative 6; Mismatches 10; Indels 0; Gaps 0;

QY 1 VRSSSTPSDMPVAHVAVNPAEQQLQWLNRRANALLANGVELRDQLVPSEGLYLYS 60

DB 77 LRSSSTPSDKPVAHVAVNPAEQQLQWLSRRANALLANGVELTDQLKVPDGLYLYS 136

QY 61 QVLFSGGCPSTHLLVTHTRISAVSYQTPVNLLSAIRPCQRETPEGEANPWYPIYL 120

DB 137 QVLFSGGCPSTHLLVTHTRISAVSYQTKVNLLSAIKPCQRETPEGEAKPWYPIYL 196

QY 121 GGVFQLEPGDRLSLSTINLPAYLDFAESGQVYFGIALL 157

DB 197 GGVFQLEKGRDLSTINLPAYLDFAESGQVYFGIALL 233

RESULT 12

TNFA_SAISC STANDARD; PRT; 233 AA.

ID TNFA_SAISC

AC Q8MKG8;

DT 10-OCT-2003 (Rel. 42, Created)

DT 13-SEP-2005 (Rel. 48, Last annotation update)

DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor necrosis factor, membrane form; Tumor necrosis factor, soluble form].

DE Name:TNF; Synonyms=TNFA, TNFSF2;

OS Saimiri sciureus (Common squirrel monkey).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae; Cebinae; Saimiri.

OC NCBI_TaxID=9521;

RP NUCLEOTIDE SEQUENCE.

RP MEDLINE=21972723; PubMed=11976788; DOI=10.1007/s00251-002-0443-Y;

RA Heraud J.M., Lavergne A., Kazanji M.;

RT "Molecular cloning, characterization, and quantification of squirrel monkey (Saimiri sciureus) Th1 and Th2 cytokines.";

RL Immunogenetics 54:20-29(2002).

CC [1]

CC [2]

RP NUCLEOTIDE SEQUENCE.

RP MEDLINE=22516846; PubMed=12628762; DOI=10.1016/S0165-2427(03)00018-7;

RA Merien F., Lavergne A., Behr C., Contamin H.;

RT "Sequencing and analysis of genomic DNA and cDNA encoding TNF-alpha in the squirrel monkey (Saimiri sciureus).";

RL Vet. Immunol. Immunopathol. 92:37-43(2003).

CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin 1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation (By similarity).

CC -!- SUBUNIT: Homotrimer (By similarity).

CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an extracellular soluble form (By similarity).

CC -!- PTM: The soluble form derives from the membrane form by proteolytic processing (By similarity).

CC -!- PTM: The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By similarity).

CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.

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CC EMBL; AF294760; AAK92047.1; -; mRNA.

CC EMBL; AJ437697; CAD2179.1; -; Genomic DNA.

CC EMBL; AJ437698; CAD2180.1; -; mRNA.

CC HSSP; P01375; 4TSV.

CC SMR; Q8MKG8; 82-233.

CC InterPro; IPR006053; TNF abc.

CC InterPro; IPR002959; TNF_alpha.

CC InterPro; IPR006052; TNF_family.

CC InterPro; IPR003636; TNF_subf.

CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.

CC Pfam; PF00229; TNF; 1.

CC PRINTS; PR01234; TNECROSISFCT.

CC PRINTS; PR01235; TNFALPHA.

CC ProDom; PD002012; TNF_subf; 1.

CC SMART; SM00207; TNF; 1.

CC PROSITE; PS00251; TNF_1; 1.

```

DR PROSITE; PS00049; TNF_2; 1.
KW Cytokine; Phosphorylation; Signal-anchor: Transmembrane.
FT CHAIN 1 233
FT FT
FT CHAIN 77 233
FT FT
FT TOPO DOM 1 32 Cytoplasmic (Potential).
FT TRANSMEM 33 55 Signal-anchor for type II membrane
FT FT protein (By similarity).
FT TOPO DOM 56 233 Extracellular (Potential).
FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT DISULFID 145 177 By similarity.
SQ SEQUENCE 233 AA; 25578 MW; 197PB066F744FCAD CRC64;

Query Match 87.0%; Score 708; DB 1; Length 233;
Best Local Similarity 87.3%; Pred. No. 3.8e-63;
Matches 137; Conservative 7; Mismatches 13; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 77 VRSSRIIPSDKVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 136
QY 61 QVLFSGGCGPSTHLLTHTISRIAVSYQTPVNLLSAIRSPCCORETPGGAANPWTEPIYL 120
DB 137 QVLFKGCGCPSTFTLLTHTISRIAVSYQAKVNLLSAIRSPCCORETPRGAKTHPWTEPIYL 196
QY 121 GGVFQLEKGRLSAENRPDYLDFAESGVYFGIIL 157
DB 197 GGVFQLEKGRLSAENRPDYLDFAESGVYFGIIL 233

RESULT 13
Q97538 AOTVO
ID Q97538 AOTVO PRELIMINARY; PRT; 149 AA.
AC Q97538;
DT 01-MAY-1999 (Tremblrel. 10, Created)
DT 01-MAY-1999 (Tremblrel. 10, Last sequence update)
DT 01-OCT-2003 (Tremblrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (Fragment).
GN Name=TNF-alpha;
OS Aotus vociferans (Spix's owl monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Aotinae; Aotus.
OX NCBI_TaxID=57176;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey."
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF014508; RAD01534.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; O97538; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; P:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF_alpha.
DR InterPro; IPR002959; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNCRSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS00049; TNF_2; 1.
FT NON_TER 1 149
FT NON_TER 149 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 86.2%; Score 702; DB 2; Length 149;
Best Local Similarity 89.9%; Pred. No. 8.8e-63;
Matches 134; Conservative 5; Mismatches 10; Indels 0; Gaps 0;

QY 8 PSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFSGQ 67
DB 1 PSDKPAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFKQ 60
QY 68 GCPSTHVLTHHTISRIAVSYQTPVNLLSAIRSPCCORETPGGAANPWTEPIYLGGVFQLE 127
DB 61 GCPSTFMLLTHTSISRIAVSYQAKVNLLSAIRSPCCORETPRGAKTHPWTEPIYLGGVFQLE 120

RESULT 14
Q9TTG8 AOTNI
ID Q9TTG8 AOTNI PRELIMINARY; PRT; 149 AA.
AC Q9TTG8;
DT 01-MAY-2000 (Tremblrel. 13, Created)
DT 01-MAY-2000 (Tremblrel. 13, Last sequence update)
DT 01-OCT-2003 (Tremblrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (Fragment).
GN Name=TNF-alpha;
OS Aotus nigricaps (Black-headed owl monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Aotinae; Aotus.
OX NCBI_TaxID=57175;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey."
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF097328; AAF21303.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; O9TTG8; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; P:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF_alpha.
DR InterPro; IPR002959; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNCRSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS00049; TNF_2; 1.
FT NON_TER 1 149
FT NON_TER 149 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 86.2%; Score 702; DB 2; Length 149;
Best Local Similarity 89.9%; Pred. No. 8.8e-63;
Matches 134; Conservative 5; Mismatches 10; Indels 0; Gaps 0;

QY 8 PSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFSGQ 67
DB 1 PSDKPAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFKQ 60
QY 68 GCPSTHVLTHHTISRIAVSYQTPVNLLSAIRSPCCORETPGGAANPWTEPIYLGGVFQLE 127
DB 61 GCPSTFMLLTHTSISRIAVSYQAKVNLLSAIRSPCCORETPRGAKTHPWTEPIYLGGVFQLE 120

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QY 128 PGDRLSAEINRPDYLDFAESGQVYFGIIA 156
Db 121 KGDRLSAEINLPDYLDLAEAGQVYFGIIA 149

RESULT 15
ID TNFA_HORSE STANDARD; PRT; 234 AA.
AC P29553; Q9TJT3;
DT 01-APR-1993 (Rel. 25, Created)
DT 01-APR-1993 (Rel. 25, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name:TNF; Synonyms:TNFA, TNFSF2;
OS Equus caballus (Horse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
OX NCBI_TaxID=9796;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=92084125; PubMed=1748301; DOI=10.1016/0378-1119(91)90333-7;
RA Su X., Morris D.D., McGraw R.A.;
RT "Cloning and characterization of gene TNF alpha encoding equine tumor
RT necrosis factor alpha.";
RL Gene 107:319-321(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=Thoroughbred; TISSUE=Artery;
RA Ishida N., Sato F., Hasegawa T.;
RT "Molecular cloning of equine tumor necrosis factor-alpha mRNA.";
RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.

DR PROSITE; PS0049; TNF 2; 1.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 234 Tumor necrosis factor, membrane form.
FT CHAIN 78 234 Tumor necrosis factor, soluble form.
FT TOPO_DOM 1 35 Cytoplasmic (Potential).
FT TRANSMEM 36 56 Signal-anchor for type II membrane protein (Potential).
FT TOPO_DOM 57 234 Extracellular (Potential).
FT SITE_77 78 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT DISULFID 146 178 By similarity.
FT CONFLICT 177 179 PCH -> LAN (in Ref. 2).
SQ SEQUENCE 234 AA; 25469 MW; E79ACE91143DF373 CRC64;
Query Match 85.6%; Score 697; DB 1; Length 234;
Best Local Similarity 85.4%; Pred. No. 5e-62;
Matches 134; Conservative 11; Mismatches 12; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
Db 78 LRSSSRTPSDKPAHVAVNPQAEGLQWLSGRANALLANGVKLTQNLVVPDLGLYLIYS 137
QY 61 QVLFSGQCGPSTHVLTTHTTISRIANVSQTPVNLISAIRSPCQRETPEGAENPWYBPIYL 120
Db 138 QVLFKGQCGPSTHVLTTHTTISRLAVSYPSKVNLLSAIKSPCHTESPEQAEAKPWYBPIYL 197
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 198 GGVFQLEKGDQLSAEINQPNYLDFAESGQVYFGIIAL 234

Search completed: May 5, 2006, 11:26:01
Job time : 53.5 secs

EMBL; M64087; AAA30959.1; -; Genomic_DNA.
EMBL; AB035735; BAA88349.1; -; mRNA.
PIR; JQ1344; JQ1344.
HSSP; P01375; 1A8M.
SNR; P29553; 83-234.
InterPro; IPR006053; TNF_abc.
InterPro; IPR002959; TNF_alpha.
InterPro; IPR006052; TNF_family.
InterPro; IPR003636; TNF_subf.
PANTHER; PTHR11471:SF4; TNF_alpha; 1.
Pfam; PF00229; TNF; 1.
PRINTS; PR01234; TNECROSISFCT.
PRINTS; PR01235; TNFALPHA.
ProDom; PD002012; TNF_subf; 1.
SMART; SM00207; TNF; 1.
PROSITE; PS00251; TNF_1; 1.

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Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
DB 1 VRSSRTSDKPKVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
QY 61 QVLFSGQGPCSTHVLTTHTISRIAVSYQTPVNLISAIRSPCORETPEGAEANPWYEPYIL 120
DB 61 QVLFKGQGPCSTHVLTTHTISRIAVSYQTKVNLISAIKSPCORETPEGAEAKPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEKGRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 2
US-08-041-648-2
; Sequence 2, Application US/08041648
; Patent No. 5486463
; GENERAL INFORMATION:
; APPLICANT: Lesslauer, Werner
; APPLICANT: L. tscher, Hansruedi
; APPLICANT: St ber, Dietrich
; TITLE OF INVENTION: TNF-MUTEINS
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: U.S.A.
; ZIP: 07110-1199
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/041,648
; FILING DATE: 1-APR-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 92810249.0
; FILING DATE: 2-APR-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Roseman, Catherine R.
; REGISTRATION NUMBER: 34240
; REFERENCE/DOCKET NUMBER: RAN 4105/147
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-6208
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-041-648-2

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
DB 1 VRSSRTSDKPKVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
QY 61 QVLFSGQGPCSTHVLTTHTISRIAVSYQTPVNLISAIRSPCORETPEGAEANPWYEPYIL 120
DB 61 QVLFKGQGPCSTHVLTTHTISRIAVSYQTKVNLISAIKSPCORETPEGAEAKPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEKGRLSAEINRPDYLDFAESGVYFGIALL 157

DB 121 GGVFQLEKGRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 3
US-08-107-235-1
; Sequence 1, Application US/08107235
; Patent No. 5587457
; GENERAL INFORMATION:
; APPLICANT: Rathjen, Deborah A
; APPLICANT: Ferrante, Antonio
; APPLICANT: Widmer, Fred
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Allegretti & Witcoff, Ltd.
; STREET: 10 S. Wacker Dr.
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/107,235
; FILING DATE: 16-AUG-1993
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/930,415
; FILING DATE: 12-MAR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McDonnell, John J
; REGISTRATION NUMBER: 26,949
; REFERENCE/DOCKET NUMBER: 92,622A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-715-1000
; TELEFAX: 312-715-1234
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: 1..157
; OTHER INFORMATION: /note= "HUMAN TNF)"
US-08-107-235-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
DB 1 VRSSRTSDKPKVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
QY 61 QVLFSGQGPCSTHVLTTHTISRIAVSYQTPVNLISAIRSPCORETPEGAEANPWYEPYIL 120
DB 61 QVLFKGQGPCSTHVLTTHTISRIAVSYQTKVNLISAIKSPCORETPEGAEAKPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEKGRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 4
US-08-217-529-2
; Sequence 2, Application US/08217529
; Patent No. 5597899
; GENERAL INFORMATION:

APPLICANT: Banner, David
APPLICANT: Lessauer, Werner
APPLICANT: Letscher, Hansreud
APPLICANT: Stuber, Dietrich
TITLE OF INVENTION: Tumor Necrosis Factor Muteins
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: U.S.
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/217,529
FILING DATE: 24-MAR-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 93810224.1
FILING DATE: 29-MAR-1993
ATTORNEY/AGENT INFORMATION:
NAME: Roseman, Catherine R
REGISTRATION NUMBER: 34240
REFERENCE/DOCKET NUMBER: 4105/155
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-6208
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-217-529-2

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSSTPSPMPVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60
DB 1 VRSSSTPSPDKPVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60

QY 61 QVLFSGGCGPSTHLLTHTTISRIVSVYQTPVNLLSAIRSPCQRETPEGAEANPWYEPYIL 120
DB 61 QVLFKGCGCPSTHLLTHTTISRIVSVYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157

RESULT 5
US-08-318-193-86
Sequence 86, Application US/08318193
Patent No. 5641663
GENERAL INFORMATION:
APPLICANT: GARVIN, Robert T.
APPLICANT: MALEK, Lawrence T.
TITLE OF INVENTION: AN EXPRESSION SYSTEM FOR THE SECRETION
TITLE OF INVENTION: OF BIOACTIVE HUMAN GRANULOCYTE MACROPHAGE COLONY
TITLE OF INVENTION: STIMULATING FACTOR (GM-CSF) AND OTHER HETEROLOGOUS
TITLE OF INVENTION: PROTEINS FROM STREPTOMYCES
NUMBER OF SEQUENCES: 91
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500
CITY: Alexandria

STATE: Virginia
COUNTRY: USA
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/318,193
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,314
FILING DATE:
APPLICATION NUMBER: US 07/224,568
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 18740/116 CACO
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-9300
TELEFAX: (703) 683-4109
TELEX: 899149
INFORMATION FOR SEQ ID NO: 86:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-318-193-86

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSSTPSPMPVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60
DB 1 VRSSSTPSPDKPVAHVAVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSSGLYLIYS 60

QY 61 QVLFSGGCGPSTHLLTHTTISRIVSVYQTPVNLLSAIRSPCQRETPEGAEANPWYEPYIL 120
DB 61 QVLFKGCGCPSTHLLTHTTISRIVSVYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157

RESULT 6
US-08-397-470-1
Sequence 1, Application US/08397470
Patent No. 5652353
GENERAL INFORMATION:
APPLICANT: Fiers, W.
APPLICANT: Tavernier, J.
APPLICANT: Van Oostade, X.
TITLE OF INVENTION: TNF-Mutins
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/397,470

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; FILING DATE: 01-MAR-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/794,400
; FILING DATE: 20-NOV-1991
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
US-08-397-470-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVWPSEGGLYLIYS 60
Db 1 VRSSRTSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVWPSEGGLYLIYS 60
QY 61 QVLFSGQGCPSTHLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
Db 61 QVLFKGQCPSTHLLTHTISRIAVSYQTKVLLSAIKSPCQRETPEGAENPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 7
US-08-192-102-1
; Sequence 1, Application US/08192102
; Patent No. 5656272
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Gharyeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND ASSAYS EMPLOYING
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/192,102
; FILING DATE: 04-FEB-1994
; CLASSIFICATION: 424
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/192,093
; FILING DATE: 04-FEB-1994
; APPLICATION NUMBER: US 08/013,413
; FILING DATE: 02-FEB-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/010,406
; FILING DATE: 29-JAN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/943,852
; FILING DATE: 11-SEP-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,606
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/670,827
; FILING DATE: 18-MAR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Brook, David E.
; REGISTRATION NUMBER: 22,592
; REFERENCE/DOCKET NUMBER: NYU93-01M3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 861-6240
; TELEFAX: (617) 861-9540
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-192-102-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVWPSEGGLYLIYS 60
Db 1 VRSSRTSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVWPSEGGLYLIYS 60
QY 61 QVLFSGQGCPSTHLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
Db 61 QVLFKGQCPSTHLLTHTISRIAVSYQTKVLLSAIKSPCQRETPEGAENPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 8
US-08-324-799-1
; Sequence 1, Application US/08324799
; Patent No. 5698195
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Gharyeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND PEPTIDES
; TITLE OF INVENTION: OF HUMAN TUMOR NECROSIS FACTOR
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/324,799
FILING DATE: 18-OCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,093
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,102
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,861
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,861
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NYU93-01M4
TELEPHONE: (617) 861-6240
TELEFAX: (617) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-324-799-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVAVNPQAGQQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTSPDMPVAHVAVNPQAGQQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHTSIRIAVSQTVPVNLISAIRSPCQRETPGEGANPWYEPYIL 120
DB 61 QVLFKGQCGPSTHVLTHTSIRIAVSQTVPVNLISAIRSPCQRETPGEGANPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIALL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIALL 157

RESULT 9
US-08-538-875-1
Sequence 1, Application US/08538875
Patent No. 5773582
GENERAL INFORMATION:
APPLICANT: Shin, Hang-Cheol
APPLICANT: Lee, Inkyung
APPLICANT: Kang, Sungzong
TITLE OF INVENTION: TUMOR NECROSIS FACTOR MUTAINS
NUMBER OF SEQUENCES: 73
CORRESPONDENCE ADDRESS:

ADDRESS: Shin, Hang-Cheol
STREET: Jukong Gocheung Apt. 1014-806, Haan-dong
CITY: Kwangmyung-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 423-060
ADDRESS: Shin, Nam-Kyu
STREET: #181-404 Sadang-4-dong, Dongjak-ku
CITY: Seoul
STATE:
COUNTRY: Republic of Korea
ZIP: 156-094
ADDRESS: Lee, Inkyung
STREET: 11/2, #302-39 Juan-4-dong, Nam-ku
CITY: Incheon
STATE:
COUNTRY: Republic of Korea
ZIP: 402-204
ADDRESS: Kang, Sungzong
STREET: #84-4 Daeshin-dong, Seodaemun-ku
CITY: Seoul
STATE:
COUNTRY: Republic of Korea
ZIP: 120-160
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette 3.5inch 2.0Mb storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/538,875
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/193,336
FILING DATE:
APPLICATION NUMBER: KR 93-1751
FILING DATE: 9-FEB-1993
ATTORNEY/AGENT INFORMATION:
NAME:
REGISTRATION NUMBER:
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE:
TELEFAX:
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-538-875-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVAVNPQAGQQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTSPDMPVAHVAVNPQAGQQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHTSIRIAVSQTVPVNLISAIRSPCQRETPGEGANPWYEPYIL 120
DB 61 QVLFKGQCGPSTHVLTHTSIRIAVSQTVPVNLISAIRSPCQRETPGEGANPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIALL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIALL 157

RESULT 10
US-08-394-600B-17

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; Sequence 17, Application US/08394600B
; Patent No. 5843693
; GENERAL INFORMATION:
; APPLICANT: Halenbeck, Robert F.
; APPLICANT: Jewell, David A.
; APPLICANT: Koths, Kirston E.
; APPLICANT: Kriegler, Michael
; APPLICANT: Perez, Carl
; TITLE OF INVENTION: Compositions for the Inhibition of
; TITLE OF INVENTION: Protein Hormone Formation and Uses Thereof
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th Floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/394,600B
; FILING DATE: 02/27/95
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Donald J. Pochopien
; REGISTRATION NUMBER: 32,167
; REFERENCE/DOCKET NUMBER: 820,005/11850US05
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX:
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-394-600B-17

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAENPWTEPIYL 120
Db 61 QVLFKGGQCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAENPWTEPIYL 120
Qy 121 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 11
US-08-500-860A-35
; Sequence 35, Application US/08500860A
; Patent No. 5891679
; GENERAL INFORMATION:
; APPLICANT: LUCAS, RUDOLPH
; APPLICANT: DE BAETSELIER, PATRICK
; APPLICANT: FRANSEN, LUCIE
; APPLICANT: SABLON, ERWIN
; TITLE OF INVENTION: TNF-MUTEINS, A PROCESS FOR PREPARING THEM AND
; TITLE OF INVENTION: THEIR USE AS ACTIVE SUBSTANCES IN PHARMACEUTICAL COMPOSITIONS
; NUMBER OF SEQUENCES: 36
; CORRESPONDENCE ADDRESS:
```

```
; ADDRESSEE: NIXON & VANDERHUYE P.C.
; STREET: 1100 NORTH GLEBE ROAD
; CITY: ARLINGTON
; STATE: VIRGINIA
; COUNTRY: U.S.A.
; ZIP: 22201-4714
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/500,860A
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: BYRNE, THOMAS E.
; REGISTRATION NUMBER: 32,205
; REFERENCE/DOCKET NUMBER: 1487-8
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703)816-4000
; TELEFAX: (703)816-4100
; TELEX: 200797 NIXN UR
; INFORMATION FOR SEQ ID NO: 35:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-500-860A-35

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAENPWTEPIYL 120
Db 61 QVLFKGGQCPSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAENPWTEPIYL 120
Qy 121 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 12
US-08-192-861A-1
; Sequence 1, Application US/08192861A
; Patent No. 5919452
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Gharyeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: METHODS OF TREATING TNF'-MEDIATED DISEASE USING
; TITLE OF INVENTION: CHIMERIC ANTI-TNF ANTIBODIES (As Amended)
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/192,861A
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NYU93-01M2
TELEPHONE: (781) 861-6240
TELEFAX: (781) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-192-861A-1

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
QY 61 QVLFSGQGCPSFTHVLLTHTSIRIAVSQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
DB 61 QVLFSGQGCPSFTHVLLTHTSIRIAVSQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 13
US-08-600-783-5
Sequence 5, Application US/08600783
Patent No. 5962267
GENERAL INFORMATION:
APPLICANT: SHIN, Hang Cheol
APPLICANT: CHANG, Seung Gu
APPLICANT: KIM, Dae Young
APPLICANT: KIM, Chong Suhl
TITLE OF INVENTION: Proinsulin Derivative and Process
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESS: SHIN, Hang Cheol
STREET: Ssangma-Hanshin Apt. 102-1206,
CITY: Kwangmyung-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 423-030
ADDRESSEE: CHANG, Seung Gu

STREET: Hyundai Apt. 71-203, Apkujong-dong,
CITY: Kangnam-ku
STATE: Seoul
COUNTRY: Republic of Korea
ZIP: 135-110
ADDRESSEE: KIM, Dae Young
STREET: Sosa Jukong Apt. 108-202, Sosa Bon-dong,
CITY: Sosa-ku
CITY: Bucheon-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 422-230
ADDRESSEE: KIM, Chong Suhl
STREET: Garden Heights Apt. 202-801, #100,
CITY: Hwangkeum-dong, Soosaung-ku
STATE: Taegu
COUNTRY: Republic of Korea
ZIP: 706-040
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk, 3.5 inch, 1.44MB storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/600,783
FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: KR 95-2751
FILING DATE: 15-FEB-1995
ATTORNEY/AGENT INFORMATION:
NAME: Shahan Lelam
REGISTRATION NUMBER: 32,507
REFERENCE/DOCKET NUMBER:
TELEPHONE: (212) 278-1000
TELEFAX: (212) 953-7249
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-600-783-5

Query Match 95.7%; Score 779; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
QY 61 QVLFSGQGCPSFTHVLLTHTSIRIAVSQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
DB 61 QVLFSGQGCPSFTHVLLTHTSIRIAVSQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 14
US-08-584-031-13
Sequence 13, Application US/08584031A
Patent No. 6030945
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi J.
TITLE OF INVENTION: APO-2 LIGAND
FILE REFERENCE: 11669.22US03

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; CURRENT APPLICATION NUMBER: US/08/584,031A
; CURRENT FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-08-584-031-13

Query Match      95.7%; Score 779; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 9.5e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 61 QVLFSGGQCPSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWTEPIYL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 61 QVLFSGGQCPSTHVLTTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAEANPWTEPIYL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
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RESULT 15
US-08-714-960B-1
; Sequence 1, Application US/08714960B
; Patent No. 6121237
; GENERAL INFORMATION:
; APPLICANT: RATHJEN, Deborah A
; APPLICANT: FERRANTE, Antonio
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BANNER & WITCOFF, LTD.
; STREET: 10 S. Wacker Drive, Suite 3000
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 1.44 Mb storage diskette, 3.50 inch
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: IBM compatible PC/MS-DOS
; SOFTWARE: WordPerfect version 6.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/714,960B
; FILING DATE: 17-SEP-1996
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: AU FJ9065
; FILING DATE: 12-MAR-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/AU91/00086
; FILING DATE: 12-MAR-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/930,415
; FILING DATE: 09-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/107,235
; FILING DATE: 16-AUG-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Resie, Robert H.
; REGISTRATION NUMBER: 32,168
; REFERENCE/DOCKET NUMBER: 92,622-B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 715-1000
; TELEFAX: (312) 715-1234
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:26:23 ; Search time 45.5 Seconds
(without alignments)
1441.741 Million cells

Title: US-10-668-178-13
 Perfect score: 814
 Sequence: 1 VRSSRTPSDMPVAHVVANP.....RPDYLDFAESGQVFGIIL 157

Scoring table: BLOSUM62
Gapop 10.0 . Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Database : Published Applications_AA_Main:*
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2: /csgn2_6/prodata1/pubpaa/US08_PUBCOMB.pep:*
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6: /csgn2_6/prodata1/pubpaa/US11_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query		DB	ID	Description
		Match	Length			
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2	814	100.0	157	5	US-10-668-178-3	Sequence 3, Appli
3	814	100.0	157	5	US-10-668-178-13	Sequence 13, Appl
4	779	95.7	157	3	US-09-756-301A-1	Sequence 1, Appli
5	779	95.7	157	3	US-09-927-703-1	Sequence 1, Appli
6	779	95.7	157	3	US-09-854-280-19	Sequence 13, Appl
7	779	95.7	157	3	US-09-934-465-13	Sequence 13, Appl
8	779	95.7	157	3	US-09-766-535A-1	Sequence 1, Appli
9	779	95.7	157	3	US-09-854-208-19	Sequence 19, Appl
10	779	95.7	157	3	US-09-756-161A-1	Sequence 1, Appli
11	779	95.7	157	3	US-09-903-327A-7	Sequence 7, Appli
12	779	95.7	157	3	US-09-756-398B-1	Sequence 1, Appli
13	779	95.7	157	3	US-09-897-724-1	Sequence 1, Appli
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16	779	95.7	157	4	US-10-044-534-1	Sequence 1, Appli
17	779	95.7	157	4	US-10-099-007A-1	Sequence 1, Appli
18	779	95.7	157	4	US-10-043-432-1	Sequence 1, Appli
19	779	95.7	157	4	US-10-119-621-1	Sequence 1, Appli
20	779	95.7	157	4	US-10-208-145-1	Sequence 1, Appli
21	779	95.7	157	4	US-10-262-630-9	Sequence 9, Appli
22	779	95.7	157	4	US-10-305-347A-9	Sequence 9, Appli
23	779	95.7	157	4	US-10-198-845-1	Sequence 1, Appli
24	779	95.7	157	4	US-10-927-488-1	Sequence 1, Appli
25	779	95.7	157	4	US-10-170-812-7	Sequence 7, Appli
26	779	95.7	157	4	US-10-187-121-1	Sequence 1, Appli
27	779	95.7	157	4	US-10-176-460-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1

```

US-10-354-985-3
; Sequence 3, Application US/10354985
; Publication No. US20040001802A1
; GENERAL INFORMATION:
; APPLICANT: MAYUMI, Tandanori et al.
; TITLE OF INVENTION: PHYSIOLOGICALLY ACTIVE COMPOUNDS
; FILE REFERENCE: MAYUMI-2
; CURRENT APPLICATION NUMBER: US/10/354,985
; CURRENT FILING DATE: 2003-01-31
; PRIOR APPLICATION NUMBER: JP 083509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 1185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 3
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Variant protein of human tu
US-10-354-985-3

```

	Query Match	100.0%;	Score 814;	DB 4;	Length 157;
	Best Local Similarity	100.0%;	Pred. No. 2.7e-80;		
	Matches 157;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;
Qy	1	VRSSRTPSPMPVAHVVANPQASGQQLWNRNALLANGVELRDNLQVVPSEGLYLIYS	60		
Db	1	VRSSRTPSPMPVAHVVANPQASGQQLWNRNALLANGVELRDNLQVVPSEGLYLIYS	60		
Qy	61	QVLFPSGGCPS THVLLTHTT LSRIASVSYQT PNVLL SAIRSPCQRETPGAGANPMWPEIYL	120		
Db	61	QVLFPSGGCPS THVLLTHTT LSRIASVSYQT PNVLL SAIRSPCQRETPGAGANPMWPEIYL	120		
Qy	121	GGVFQLEPGDRLSAEINRPDYLPFAESGVYFGIIAL	157		
Db	121	GGVFQLEPGDRLSAEINRPDYLPFAESGVYFGIIAL	157		

RESULT 2

US-10-668-178-3
; Sequence 3, Application US/10668178
; Publication No. US20050013795A1
; GENERAL INFORMATION:
; APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAKAKU KENKYUJYO
; APPLICANT: MAYUMI Tadanori
; APPLICANT: TSUTSUMI, Yasuo
; APPLICANT: NAKAGAWA, Shinsaku

; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMI2A
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 3
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: synthetic (Variant protein of human tumor necrosis factor)
US-10-668-178-3

Query Match 100.0%; Score 814; DB 5; Length 157;
Best Local Similarity 100.0%; Pred. No. 2.7e-80;
Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
DB 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 3
US-10-668-178-13
; Sequence 13, Application US/10668178
; Publication NO. US20050013795A1
; GENERAL INFORMATION:
; APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
; APPLICANT: TAYUMI, Tadanori
; APPLICANT: TSUTSUMI, Yasuo
; APPLICANT: NAKAGAWA, Shinsaku
; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMI2A
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Synthetic Construct
US-10-668-178-13

Query Match 100.0%; Score 814; DB 5; Length 157;
Best Local Similarity 100.0%; Pred. No. 2.7e-80;
Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120

DB 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 4
US-09-756-301A-1
; Sequence 1, Application US/09756301A
; Patent No. US20010027249A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junning
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-008
; CURRENT APPLICATION NUMBER: US/09/756.301A
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-756-301A-1

Query Match 95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
DB 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTPVNLLSAIRSPCQRETPEGAEANPWYEPIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 5
US-09-927-703-1

Sequence 1, Application US/09927703
Patent No. US2002022720A1

GENERAL INFORMATION:

APPLICANT: Le, Junming
APPLICANT: Vilcek, Jan
APPLICANT: Daddona, Peter
APPLICANT: Ghayeb, John
APPLICANT: Knight, David M.
APPLICANT: Siegel, Scott
TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of Human Tumor Necrosis Factor

FILE REFERENCE: 0975.1005-013

CURRENT APPLICATION NUMBER: US/09/927,703

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: U.S. 09/756,398

PRIOR FILING DATE: 2001-01-08

PRIOR APPLICATION NUMBER: U.S. 09/133,119

PRIOR FILING DATE: 1998-08-12

PRIOR APPLICATION NUMBER: U.S. 08/570,674

PRIOR FILING DATE: 1995-12-11

PRIOR APPLICATION NUMBER: U.S. 08/324,799

PRIOR FILING DATE: 1994-10-18

PRIOR APPLICATION NUMBER: U.S. 08/192,102

PRIOR FILING DATE: 1994-02-04

PRIOR APPLICATION NUMBER: U.S. 08/192,861

PRIOR FILING DATE: 1994-02-04

PRIOR APPLICATION NUMBER: U.S. 08/192,093

PRIOR FILING DATE: 1994-02-04

PRIOR APPLICATION NUMBER: U.S. 08/010,406

PRIOR FILING DATE: 1993-01-29

PRIOR APPLICATION NUMBER: U.S. 08/013,413

PRIOR FILING DATE: 1993-02-02

PRIOR APPLICATION NUMBER: U.S. 07/943,852

PRIOR FILING DATE: 1992-09-11

PRIOR APPLICATION NUMBER: U.S. 07/853,606

PRIOR FILING DATE: 1992-03-18

PRIOR APPLICATION NUMBER: U.S. 07/670,827

PRIOR FILING DATE: 1991-03-18

NUMBER OF SEQ ID NOS: 19

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 1

LENGTH: 157

TYPE: PRT

ORGANISM: Homo sapiens

US-09-927-703-1

Query Match 95.7%; Score 779; DB 3; Length 157;

Best Local Similarity 96.2%; Pred. No. 1.7e-76;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

DB 1 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSPTHVLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120

DB 61 QVLFKGQGCPSPTHVLLTHTISRIASVYQTKVNLLSAIRSPCORETPEGAEANPWYEPYIL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 6

US-09-854-280-19

Sequence 19, Application US/09854280

Patent No. US20020052027A1

GENERAL INFORMATION:

APPLICANT: Chen, Jian

APPLICANT: Filvaroff, Ellen

APPLICANT: Goddard, Audrey

APPLICANT: Gurney, Austin

APPLICANT: Li, Hanzhong

APPLICANT: Wood, William I.

TITLE OF INVENTION: IL-17 HOMOLOGOUS POLYPEPTIDES AND THERAPEUTIC USES THEREOF

FILE REFERENCE: P1381R1C2

CURRENT APPLICATION NUMBER: US/09/854,280

CURRENT FILING DATE: 2001-05-10

PRIOR APPLICATION NUMBER: US 09/311,832

PRIOR FILING DATE: 1999-05-14

PRIOR APPLICATION NUMBER: US 60/085,579

PRIOR FILING DATE: 1998-05-15

PRIOR APPLICATION NUMBER: US 60/113,621

PRIOR FILING DATE: 1998-12-23

NUMBER OF SEQ ID NOS: 26

SEQ ID NO 19

LENGTH: 157

TYPE: PRT

ORGANISM: Homo sapiens

US-09-854-280-19

Query Match 95.7%; Score 779; DB 3; Length 157;

Best Local Similarity 96.2%; Pred. No. 1.7e-76;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

DB 1 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSPTHVLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120

DB 61 QVLFKGQGCPSPTHVLLTHTISRIASVYQTKVNLLSAIRSPCORETPEGAEANPWYEPYIL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 7

US-09-934-465-13

Sequence 13, Application US/09934465

Patent No. US20020102233A1

GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi J.

TITLE OF INVENTION: APO-2 LIGAND

FILE REFERENCE: 11669.22US03

CURRENT APPLICATION NUMBER: US/09/934,465

CURRENT FILING DATE: 2001-08-21

PRIOR APPLICATION NUMBER: 08/584,031

PRIOR FILING DATE: 1996-01-09

NUMBER OF SEQ ID NOS: 17

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 13

LENGTH: 157

TYPE: PRT

ORGANISM: Homo sapiens

US-09-934-465-13

Query Match 95.7%; Score 779; DB 3; Length 157;

Best Local Similarity 96.2%; Pred. No. 1.7e-76;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

DB 1 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSPTHVLLTHTISRIASVYQTPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120

DB 61 QVLFKGQGCPSPTHVLLTHTISRIASVYQTKVNLLSAIRSPCORETPEGAEANPWYEPYIL 120

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 8

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US-09-766-535A-1
; Sequence 1, Application US/09766535A
; Patent No. US20020106372A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John M.
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-010
; CURRENT APPLICATION NUMBER: US/09/766,535A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-766-535A-1

Query Match          95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAVHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGPCSTHVLTLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAENPWTPEIYL 120
DB 61 QVLFKGGQPCSTHVLTLTHTISRIAVSYQTKVNLLSAIRSPCORETPEGAENPWTPEIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 10
US-09-756-161A-1
; Sequence 1, Application US/09756161A
; Patent No. US2002013207A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-007
; CURRENT APPLICATION NUMBER: US/09/756,161A
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-766-535A-1

Query Match          95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAVHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGPCSTHVLTLTHTISRIAVSYQTPVNLLSAIRSPCORETPEGAENPWTPEIYL 120
DB 61 QVLFKGGQPCSTHVLTLTHTISRIAVSYQTKVNLLSAIRSPCORETPEGAENPWTPEIYL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 9
US-09-854-208-19
; Sequence 19, Application US/09854208
; Patent No. US20020106743A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Goddard, Audrey
; APPLICANT: Gurney, Austin
; APPLICANT: Li, Hanzhong
; APPLICANT: Wood, William I.
```

; NUMBER OF SEQ ID NOS: 19		; Publication No. US20030017584A1	
; SOFTWARE: FastSeq for Windows Version 4.0		; GENERAL INFORMATION:	
; SEQ ID NO 1		; APPLICANT: Le, Junming	
; LENGTH: 157		; APPLICANT: Vilcek, Jan	
; TYPE: PRT		; APPLICANT: Daddona, Peter	
; ORGANISM: Homo sapiens		; APPLICANT: Ghayeb, John	
US-09-756-161A-1		; APPLICANT: Knight, David M.	
Query Match		; APPLICANT: Siegel, Scott	
Best Local Similarity 95.7%; Score 779; DB 3; Length 157;		; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of	
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;		; FILE REFERENCE: 0975.1005-006	
QY 1 VRSSRTSPDMPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60		; CURRENT APPLICATION NUMBER: US/09/756,398B	
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60		; CURRENT FILING DATE: 2001-01-08	
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLSSAIRSPCORETPEGAEANPWYBPYIL 120		; PRIOR APPLICATION NUMBER: U.S. 09/133,119	
Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLSSAIRSPCORETPEGAEANPWYBPYIL 120		; PRIOR FILING DATE: 1998-08-12	
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157		; PRIOR APPLICATION NUMBER: U.S. 08/570,674	
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157		; PRIOR FILING DATE: 1995-12-11	
RESULT 11		; PRIOR APPLICATION NUMBER: U.S. 08/324,799	
US-09-903-327A-7		; PRIOR FILING DATE: 1994-10-18	
; Sequence 7, Application US/09903327A		; PRIOR APPLICATION NUMBER: U.S. 08/192,102	
; Patent No. US2002016433A1		; PRIOR FILING DATE: 1994-02-04	
; GENERAL INFORMATION:		; PRIOR APPLICATION NUMBER: U.S. 08/192,861	
; APPLICANT: Nemerow, Glen R.		; PRIOR FILING DATE: 1994-02-04	
; TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET		; PRIOR APPLICATION NUMBER: U.S. 08/010,406	
; TITLE OF INVENTION: GENE		; PRIOR FILING DATE: 1993-01-29	
; TITLE OF INVENTION: DELIVERY		; PRIOR APPLICATION NUMBER: U.S. 08/013,413	
; FILE REFERENCE: 22908-1228		; PRIOR FILING DATE: 1993-02-02	
; CURRENT APPLICATION NUMBER: US/09/903,327A		; PRIOR APPLICATION NUMBER: U.S. 07/943,852	
; CURRENT FILING DATE: 2001-07-10		; PRIOR FILING DATE: 1992-09-11	
; PRIOR APPLICATION NUMBER: 09/613,017		; PRIOR APPLICATION NUMBER: U.S. 07/853,606	
; PRIOR FILING DATE: 2000-07-10		; PRIOR FILING DATE: 1992-03-18	
; NUMBER OF SEQ ID NOS: 33		; PRIOR APPLICATION NUMBER: U.S. 07/670,827	
; SOFTWARE: FastSeq for Windows Version 4.0		; PRIOR FILING DATE: 1991-03-18	
; SEQ ID NO 7		; NUMBER OF SEQ ID NOS: 19	
; LENGTH: 157		; SOFTWARE: FastSeq for Windows Version 4.0	
; TYPE: PRT		; SEQ ID NO 1	
; ORGANISM: Human		; LENGTH: 157	
; FEATURE:		; TYPE: PRT	
; NAME/KEY: PEPTIDE		; ORGANISM: Homo sapiens	
; LOCATION: (0)...(0)		US-09-756-398B-1	
; OTHER INFORMATION: Tumor necrosis factor-alpha (TNF alpha, mature		Query Match	
; OTHER INFORMATION: peptide)		Best Local Similarity 95.7%; Score 779; DB 3; Length 157;	
US-09-903-327A-7		Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;	
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Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60		Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60	
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLSSAIRSPCORETPEGAEANPWYBPYIL 120		QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLSSAIRSPCORETPEGAEANPWYBPYIL 120	
Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLSSAIRSPCORETPEGAEANPWYBPYIL 120		Db 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTPVNLSSAIRSPCORETPEGAEANPWYBPYIL 120	
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157		QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157	
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157		Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157	
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US-09-756-398B-1		US-09-897-724-1	
; Sequence 1, Application US/09756398B		; Sequence 1, Application US/09897724	
; Publication No. US20030175837A1		; Publication No. US20030175837A1	
; GENERAL INFORMATION:		; GENERAL INFORMATION:	
; APPLICANT: Le, Junming		; APPLICANT: Le, Junming	
; APPLICANT: Vilcek, Jan		; APPLICANT: Vilcek, Jan	
; APPLICANT: Daddona, Peter		; APPLICANT: Daddona, Peter	
; APPLICANT: Ghayeb, John		; APPLICANT: Ghayeb, John	
; APPLICANT: Knight, David M.		; APPLICANT: Knight, David M.	
; APPLICANT: Siegel, Scott		; APPLICANT: Siegel, Scott	
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of		; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of	
; FILE REFERENCE: 09756398B-1		; FILE REFERENCE: 09756398B-1	

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; FILE REFERENCE: 0975.1005-012
; CURRENT APPLICATION NUMBER: US/09/897,724
; CURRENT FILING DATE: 2001-07-02
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-897-724-1

Query Match          95.7%; Score 779; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60

QY 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTPVNLISAIKSPCORETPEGAEANPWYEPIYL 120
DB 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTPVNLISAIKSPCORETPEGAEANPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEKGDRLSABINRPDYLDFAESGVYFGIALL 157

RESULT 14
US-10-010-229-1
; Sequence 1, Application US/10010229
; Publication No. US20020114805A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; FILE REFERENCE: 0975.1005-013
; CURRENT APPLICATION NUMBER: US/10/010,229
; CURRENT FILING DATE: 2001-12-07
; PRIOR APPLICATION NUMBER: US/09/927,703
; PRIOR FILING DATE: 2001-08-10
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-010-229-1

Query Match          95.7%; Score 779; DB 4; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60

QY 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTPVNLISAIKSPCORETPEGAEANPWYEPIYL 120
DB 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTPVNLISAIKSPCORETPEGAEANPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEKGDRLSABINRPDYLDFAESGVYFGIALL 157

RESULT 15
US-10-043-450-1
; Sequence 1, Application US/10043450
; Publication No. US20020141996A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; FILE REFERENCE: 0975.1005-013
; CURRENT APPLICATION NUMBER: US/10/043,450
; CURRENT FILING DATE: 2002-01-10
; PRIOR APPLICATION NUMBER: 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-043-450-1

Query Match          95.7%; Score 779; DB 4; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.7e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRNQLVVPSEGLYLIYS 60

QY 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTPVNLISAIKSPCORETPEGAEANPWYEPIYL 120
DB 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTPVNLISAIKSPCORETPEGAEANPWYEPIYL 120

QY 121 GGVFQLEPGDRLSABINRPDYLDFAESGVYFGIALL 157
DB 121 GGVFQLEKGDRLSABINRPDYLDFAESGVYFGIALL 157
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Db 121 GGVFQLEKGDRLSABINRPDYLLDFAESGOVYFGIIAL 157

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Job time : 46.5 secs

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GenCore version 5.1.1.7
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 11:26:47 ; Search time 9.75 Seconds
(without alignments)
745.303 Million cell updates/sec

Title: US-10-668-178-13
Perfect score: 814
Sequence: 1 VRSSRTSPDMPVHVANP.....RPDYLDFAESGVFGIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 235405 seqs, 46284737 residues

Total number of hits satisfying chosen parameters: 235405

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA_New:
1: /SIDSS/ptodata/1/pubpaa/US08_NEW_PUB.pep:1*
2: /SIDSS/ptodata/1/pubpaa/US06_NEW_PUB.pep:2*
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4: /SIDSS/ptodata/1/pubpaa/US08_NEW_PUB.pep:4*
5: /SIDSS/ptodata/1/pubpaa/PCT_NEW_PUB.pep:5*
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7: /SIDSS/ptodata/1/pubpaa/US09_NEW_PUB.pep:7*
8: /SIDSS/ptodata/1/pubpaa/US10_NEW_PUB.pep:8*
9: /SIDSS/ptodata/1/pubpaa/US10_NEW_PUB.pep:9*
10: /SIDSS/ptodata/1/pubpaa/US11_NEW_PUB.pep:10*
11: /SIDSS/ptodata/1/pubpaa/US11_NEW_PUB.pep:11*
12: /SIDSS/ptodata/1/pubpaa/US60_NEW_PUB.pep:12*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	779	95.7	157	11 US-11-010-954-1	Sequence 1, Appli
2	779	95.7	157	11 US-11-053-750-1	Sequence 1, Appli
3	779	95.7	157	11 US-11-053-749-1	Sequence 1, Appli
4	779	95.7	157	11 US-11-108-001-12	Sequence 12, Appli
5	779	95.7	157	11 US-11-170-753-1	Sequence 1, Appli
6	779	95.7	157	11 US-11-179-359-1	Sequence 1, Appli
7	779	95.7	157	11 US-11-181-030-1	Sequence 1, Appli
8	779	95.7	157	11 US-11-182-033-1	Sequence 1, Appli
9	779	95.7	157	11 US-11-195-589-1	Sequence 1, Appli
10	779	95.7	158	11 US-11-082-544-4	Sequence 4, Appli
11	779	95.7	164	11 US-11-108-001-2	Sequence 2, Appli
12	779	95.7	170	8 US-10-430-953-35	Sequence 35, Appli
13	779	95.7	180	11 US-11-082-544-8	Sequence 8, Appli
14	779	95.7	233	9 US-10-523-328-1	Sequence 1, Appli
15	779	95.7	233	11 US-11-246-387-8	Sequence 8, Appli
16	770	94.6	157	9 US-10-504-389A-55	Sequence 55, Appli
17	634.5	77.9	235	11 US-11-032-797-8	Sequence 8, Appli
18	488	60.0	104	11 US-11-065-663-5	Sequence 5, Appli
19	488	60.0	104	11 US-11-249-714-5	Sequence 5, Appli
20	213.5	26.2	177	9 US-10-999-866-61	Sequence 61, Appli
21	213.5	26.2	205	9 US-10-995-561-1028	Sequence 1028, Ap

ALIGNMENTS

RESULT 1

US-11-010-954-1
; Sequence 1, Application US/11010954
; Publication No. US20050249735A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Shealy, David
; TITLE OF INVENTION: Methods of Treating Ankylosing Spondylitis Using Anti-TNF Antibio
; FILE REFERENCE: 0975.1005-043
; CURRENT APPLICATION NUMBER: US/11/010,954
; CURRENT FILING DATE: 2004-12-13
; PRIOR APPLICATION NUMBER: US 10/637,759
; PRIOR FILING DATE: 2003-08-08
; PRIOR APPLICATION NUMBER: US 09/920,137
; PRIOR FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 60/236,826
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: US 60/223,360
; PRIOR FILING DATE: 2000-08-07
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-010-954-1

Query Match 95.7%; Score 779; DB 11; Length 157;

Best Local Similarity 96.2%; Pred. No. 1.3e-75;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVHVANPQAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

DB 1 VRSSRTSPDMPVHVANPQAEGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Qy	61	QVLPSQGQCPSTHVLTTHTTISRIASVSYQTPNVLSAITSRCQRETPGGAANPWYPIYL	120
Db	61	QVLFRGQGPCSTHVLTTHTTISRIASVSYQTKNVLSAITSKPCQRETPGGAANPWYPIYL	120
Qy	121	GGVQLPEPGDRLSAENRPDVLDFAESQGVYFGIIAL	157
Db	121	GGVQLPEKGRDRLSAENRPDVLDFAESQGVYFGIIAL	157

RESULT 2

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US-11-053-750-1
; Sequence 1, Application US/11053750
; Publication No. US20050255104A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghraieb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Scallon, Bernard
; TITLE OF INVENTION: Methods of Treating Psoriasis Using
; TITLE OF INVENTION: Anti-TNF Receptor Fusion Proteins

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Query Match	95.7%	Score 779;	DB 11;	Length 157;
Best Local Similarity	96.2%	Pred. NO. 1.3e-75;		
Matches 151;	Conservative	1;	Mismatches 5;	Indels 0;
Gaps 0;				

Qy 1 VRSSRTPSDMPVAHVWVPAQEGQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
|||||
Db 1 VRSSRTPSDKPKVAHVWVPAQEGQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
|||||

Qy 61 QVLFSGGCGPSTHVLLTHTSIRIAVSQTVPWLLSAIRSPCQRETPEGAENPWEPYIL 120
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| ||| ||| ||| ||| |||
Nb 61 QVLFKGGCGPSTHVI LTHTSIRIAVSQTKNL I SAI KSPCRETPEGAEAKPWEPYIL 120

Qy 121 GGVFQIEPGDRLSAETNRPDYLDFAESGVYFGIIAL 157

RESULT 3

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US-11-053-749-1
; Sequence 1, Application US/11053749
; Publication No. US20050260201A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Scallon, Bernard
; TITLE OF INVENTION: Methods of Treating Rheumatoid Arthritis
; TITLE OF INVENTION: Using Anti-TNF Receptor Fusion Proteins

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Query Match	95.7%	Score	779;	DB	11;	Length	157;
Best Local Similarity	96.2%;	Pred. No.	1.3e-75;				
Matches	151;	Mismatches	1;	Indels	0;	Gaps	0;
Conservative							

Qy	1	VRSSRTSDMPVAHVVAWVPAQEGLOWLNRRANALLANGVELRDNLVVPSEGLYLIYS	60
Dh <td>1 <td>VRSSRTSDKPVAAHVVAWVPAQEGLOWLNRRANALLANGVELRDNLVVPSEGLYLIYS <td>60</td> </td></td>	1 <td>VRSSRTSDKPVAAHVVAWVPAQEGLOWLNRRANALLANGVELRDNLVVPSEGLYLIYS <td>60</td> </td>	VRSSRTSDKPVAAHVVAWVPAQEGLOWLNRRANALLANGVELRDNLVVPSEGLYLIYS <td>60</td>	60

QY	61	QVLFSGGCGPSTHVLTHTSIRIAVSQTPNVLLSAIRSPCQRETPEGAEANPWYEIYL	120
pB	61	QVLFKGGCGPSTHVLTHTSIRIAVSQTKNLLSAIKSCQRETPEGAEAKPWYEIYL	120

QY 121 GGVFQIEPGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
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RESULT 4

US-11-108-001-12
Sequence 12, Application US/11080001
Publication No. US20050265962A1
GENERAL INFORMATION:
APPLICANT: Desjarlais, John R.
APPLICANT: Steed, Paul Michael
APPLICANT: Zatevsky, Jonathan
APPLICANT: Szymkowski, David Edmund
TITLE OF INVENTION: PROTEIN BASED T
TITLE OF INVENTION: RELATED DISORD

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; FILE REFERENCE: A-68990-7
; CURRENT APPLICATION NUMBER: US/11/108,001
; CURRENT FILING DATE: 2005-04-14
; PRIOR APPLICATION NUMBER: US 10/963,994
; PRIOR FILING DATE: 2004-10-12
; PRIOR APPLICATION NUMBER: US 09/798,789
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: US 09/945,150
; PRIOR FILING DATE: 2001-08-31
; PRIOR APPLICATION NUMBER: US 09/981,289
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 10/262,630
; PRIOR FILING DATE: 2002-09-30
; PRIOR APPLICATION NUMBER: US 60/553,908
; PRIOR FILING DATE: 2004-03-17
; PRIOR APPLICATION NUMBER: US 60/510,430
; PRIOR FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: US 60/509,960
; PRIOR FILING DATE: 2003-10-09
; PRIOR APPLICATION NUMBER: US 60/528,275
; PRIOR FILING DATE: 2003-12-08
; PRIOR APPLICATION NUMBER: US 60/523,647
; PRIOR FILING DATE: 2003-11-20
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 12
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-108-001-12

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
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Db 1 VRSSRTPSDKPVAVHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
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QY 61 QVLFSGQCGPSTHVLTHTSRIASVYQTPVNLISAIRSCQRETPGEGANPWYEPYIL 120
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QY 121 GGVFQLEPGDRLSAENRPDYLDPAESGQVYFGIALL 157
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Db 121 GGVFQLEKGRDLSAENRPDYLDPAESGQVYFGIALL 157
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RESULT 5
US-11-170-753-1
; Sequence 1, Application US/11/10753
; Publication No. US20060013816A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods of Treating Psoriasis Using
; TITLE OF INVENTION: Human Anti-TNF Antibodies and Fragments
; FILE REFERENCE: 0975.1005-050
; CURRENT APPLICATION NUMBER: US/11/170,753
; CURRENT FILING DATE: 2005-06-29
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/12-11
; TITLE OF INVENTION: Human Anti-TNF Antibodies and Fragments
; FILE REFERENCE: 0975.1005-050
; CURRENT APPLICATION NUMBER: US/11/170,753
; CURRENT FILING DATE: 2005-06-29
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/12-11
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; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-170-753-1

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPVAVHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||

QY 61 QVLFSGQCGPSTHVLTHTSRIASVYQTPVNLISAIRSCQRETPGEGANPWYEPYIL 120
   |||||
Db 61 QVLFKQCGPSTHVLTHTSRIASVYQTKVNLISAIKSPCQRETPGEGAKPWYEPYIL 120
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QY 121 GGVFQLEPGDRLSAENRPDYLDPAESGQVYFGIALL 157
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Db 121 GGVFQLEKGRDLSAENRPDYLDPAESGQVYFGIALL 157
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RESULT 6
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; Publication No. US20060018905A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods for Treating Systemic Lupus Erythematosus
; TITLE OF INVENTION: Using Anti-TNF Antibodies and Fragments Thereof
; FILE REFERENCE: 0975.1005-054
; CURRENT APPLICATION NUMBER: US/11/179,359
; CURRENT FILING DATE: 2005-07-12
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
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; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-179-359-1

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
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Db 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
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Db 61 QVLFKGQGCPSHTVLLTHTTISRIVSYQTKVNLLSAIRSPCORETPEGAEAKPWYEPIYL 120
   |||||

QY 121 GGVFQLEPGDRLSASINRPDYLDFAESGQVYFGIIAL 157
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Db 121 GGVFQLEKGDRLSASINRPDYLDFAESGQVYFGIIAL 157
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RESULT 7
US-11-181-030-1
; Sequence 1, Application US/11181030
; Publication No. US20060018906A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghraieb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods for Treating Sarcoidosis Using
; FILE OF INVENTION: Anti-TNF Antibodies and Fragments Thereof
; FILE REFERENCE: 0975.1005-055
; CURRENT APPLICATION NUMBER: US/11/181,030
; CURRENT FILING DATE: 2005-07-13
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-181-030-1

Query Match          95.7%; Score 779; DB 11; Length 157;
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Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
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Db 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
   |||||
Db 61 QVLFKGQGCPSHTVLLTHTTISRIVSYQTKVNLLSAIRSPCORETPEGAEAKPWYEPIYL 120
   |||||

QY 121 GGVFQLEPGDRLSASINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 121 GGVFQLEKGDRLSASINRPDYLDFAESGQVYFGIIAL 157
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RESULT 8
US-11-182-033-1
; Sequence 1, Application US/11182033
; Publication No. US20060018907A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghraieb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Shealy, David
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of Human
; FILE OF INVENTION: Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-044
; CURRENT APPLICATION NUMBER: US/11/182,033
; CURRENT FILING DATE: 2005-07-14
; PRIOR APPLICATION NUMBER: US 10/637,759
; PRIOR FILING DATE: 2003-08-08
; PRIOR APPLICATION NUMBER: US 09/920,137
; PRIOR FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 60/236,826
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: US 60/223,360
; PRIOR FILING DATE: 2000-08-07
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-182-033-1

Query Match          95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||
Db 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
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QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTPVNLLSAIRSPCORETPEGAEANPWYEPIYL 120
   |||||
Db 61 QVLFKGQGCPSHTVLLTHTTISRIVSYQTKVNLLSAIRSPCORETPEGAEAKPWYEPIYL 120
   |||||

QY 121 GGVFQLEPGDRLSASINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 121 GGVFQLEKGDRLSASINRPDYLDFAESGQVYFGIIAL 157
   |||||

RESULT 9
US-11-195-589-1
; Sequence 1, Application US/11195589
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Publication No. US20060024310A1
GENERAL INFORMATION:
APPLICANT: Le, Junming
APPLICANT: Wilcek, Jan
APPLICANT: Daddona, Peter
APPLICANT: Ghayeb, John
APPLICANT: Knight, David
APPLICANT: Siegel, Scott
TITLE OF INVENTION: Methods of Treating TNFa-Mediated
Tissue Injury Using Anti-TNF Antibodies and Peptides
FILE REFERENCE: 0975.1005-042
CURRENT APPLICATION NUMBER: US/11/195,589
PRIOR FILING DATE: 2005-08-02
PRIOR APPLICATION NUMBER: US 09/927,703
PRIOR FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: US 09/756,398
PRIOR FILING DATE: 2001-01-08
PRIOR APPLICATION NUMBER: US 09/333,119
PRIOR FILING DATE: 1998-08-12
PRIOR APPLICATION NUMBER: US 08/570,674
PRIOR FILING DATE: 1995-12-11
PRIOR APPLICATION NUMBER: US 08/324,799
PRIOR FILING DATE: 1994-10-18
PRIOR APPLICATION NUMBER: US 08/192,102
PRIOR FILING DATE: 1994-02-04
PRIOR APPLICATION NUMBER: US 08/192,861
PRIOR FILING DATE: 1994-02-04
PRIOR APPLICATION NUMBER: US 08/192,093
PRIOR FILING DATE: 1994-02-04
PRIOR APPLICATION NUMBER: US 08/010,406
PRIOR FILING DATE: 1993-01-29
PRIOR APPLICATION NUMBER: US 08/013,413
PRIOR FILING DATE: 02-02-1993
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 1
LENGTH: 157
TYPE: PRT
ORGANISM: Homo sapiens
US-11-195-589-1

Query Match 95.7%; Score 779; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTHTRIAVSQTPVNLISAIRSCQRETPEGAEANPWYEPYIL 120
Db 61 QVLFKGCGCPSTHVLTHTRIAVSQTKVNLISAIKSPCQRETPEGAEAKPWYEPYIL 120
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 10
US-11-082-544-4
Sequence 4, Application US/11082544
Publication No. US20050249706A1
GENERAL INFORMATION:
APPLICANT: Bermudes, G.
APPLICANT: King, I.
APPLICANT: Clairmont, C.
APPLICANT: Lin, S.
APPLICANT: Belcourt, M.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TUMOR-TARGETED DELIVERY OF EFFECTOR MOLECULES
FILE REFERENCE: 8002-059
CURRENT APPLICATION NUMBER: US/11/082,544

CURRENT FILING DATE: 2005-03-17
PRIOR APPLICATION NUMBER: US/09/645,415
PRIOR FILING DATE: 2000-08-24
PRIOR APPLICATION NUMBER: 60/157,581
PRIOR FILING DATE: 1999-10-04
PRIOR APPLICATION NUMBER: 60/157,637
PRIOR FILING DATE: 1999-10-04
NUMBER OF SEQ ID NOS: 61
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 4
LENGTH: 158
TYPE: PRT
ORGANISM: Homo sapiens
US-11-082-544-4

Query Match 95.7%; Score 779; DB 11; Length 158;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 2 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 61
QY 61 QVLFSGGCGPSTHVLTHTRIAVSQTPVNLISAIRSCQRETPEGAEANPWYEPYIL 120
Db 62 QVLFKGCGCPSTHVLTHTRIAVSQTKVNLISAIKSPCQRETPEGAEAKPWYEPYIL 121
QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 122 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 158

RESULT 11
US-11-108-001-2
Sequence 2, Application US/11108001
Publication No. US20050246562A1
GENERAL INFORMATION:
APPLICANT: Desjarlais, John R.
APPLICANT: Steed, Paul Michael
APPLICANT: Zalevsky, Jonathan
APPLICANT: Szymkowski, David Edmund
TITLE OF INVENTION: PROTEIN BASED TNF-ALPHA VARIANTS FOR THE TREATMENT OF TNF-ALPHA
RELATED DISORDERS
FILE REFERENCE: A-68990-7
CURRENT APPLICATION NUMBER: US/11/108,001
CURRENT FILING DATE: 2005-04-14
PRIOR APPLICATION NUMBER: US 10/963,994
PRIOR FILING DATE: 2004-10-12
PRIOR APPLICATION NUMBER: US 09/798,789
PRIOR FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: US 09/945,150
PRIOR FILING DATE: 2001-08-31
PRIOR APPLICATION NUMBER: US 09/981,289
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: US 10/262,630
PRIOR FILING DATE: 2002-09-30
PRIOR APPLICATION NUMBER: US 60/553,908
PRIOR FILING DATE: 2004-03-17
PRIOR APPLICATION NUMBER: US 60/510,430
PRIOR FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/509,960
PRIOR FILING DATE: 2003-10-09
PRIOR APPLICATION NUMBER: US 60/528,275
PRIOR FILING DATE: 2003-12-08
PRIOR APPLICATION NUMBER: US 60/523,647
PRIOR FILING DATE: 2003-11-20
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn version 3.3
SEQ ID NO 2
LENGTH: 164
TYPE: PRT
ORGANISM: Homo sapiens

US-11-108-001-2

Query Match 95.7%; Score 779; DB 11; Length 164;
Best Local Similarity 96.2%; Pred. No. 1.4e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 8 VRSSRTSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 67
Qy 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
Db 68 QVLFKGQGPCSTHLLTHTTISRIVSYQTKVNLLSAIRSPCQRETPEGAENPWYEPIYL 127
Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
Db 128 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIIAL 164

RESULT 12

US-10-490-953-35
; Sequence 35, Application US/10490953
; Publication No. US20060088908A1
; GENERAL INFORMATION:
; APPLICANT: SKERPA, ARNE
; APPLICANT: SCHLEUBER, STEFFEN
; TITLE OF INVENTION: MUTAINS OF HUMAN NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN AND
; FILE REFERENCE: 029029-0104
; CURRENT APPLICATION NUMBER: US/10/490,953
; PRIOR FILING DATE: 2004-03-29
; PRIOR APPLICATION NUMBER: PCT/EP02/10490
; PRIOR FILING DATE: 2002-09-18
; PRIOR APPLICATION NUMBER: PCT/EP02/04223
; PRIOR FILING DATE: 2002-04-16
; PRIOR APPLICATION NUMBER: PCT/EP01/11213
; PRIOR FILING DATE: 2001-09-27
; NUMBER OF SEQ ID NOS: 39
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 35
; LENGTH: 170
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: amino acid sequence
; FEATURE:
; NAME/KEY: CHAIN
; LOCATION: (1)..(170)
; OTHER INFORMATION: fusion protein of tumor necrosis factor alpha and
; OTHER INFORMATION: affinity tag
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (1)..(13)
; OTHER INFORMATION: Affinity tag Arg-Gly-Ser-His(6)-Gly(3)
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (14)..(170)
; OTHER INFORMATION: mature tumor necrosis factor alpha
US-10-490-953-35

Query Match 95.7%; Score 779; DB 8; Length 170;
Best Local Similarity 96.2%; Pred. No. 1.5e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Qy 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
Db 74 QVLFKGQGPCSTHLLTHTTISRIVSYQTKVNLLSAIRSPCQRETPEGAENPWYEPIYL 133

Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
Db 134 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIIAL 170

RESULT 13

US-11-082-544-8
; Sequence 8, Application US/11082544
; Publication No. US20050249706A1
; GENERAL INFORMATION:
; APPLICANT: Bermudes, G.
; APPLICANT: King, I.
; APPLICANT: Clairmont, C.
; APPLICANT: Lin, S.
; APPLICANT: Belcourt, M.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; FILE REFERENCE: 8002-059
; CURRENT APPLICATION NUMBER: US/11/082,544
; PRIOR FILING DATE: 2005-03-17
; PRIOR APPLICATION NUMBER: US/09/645,415
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/157,581
; PRIOR FILING DATE: 1999-10-04
; PRIOR APPLICATION NUMBER: 60/157,637
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 61
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 8
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Fusion construct
US-11-082-544-8

Query Match 95.7%; Score 779; DB 11; Length 180;
Best Local Similarity 96.2%; Pred. No. 1.6e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSDMPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 24 VRSSRTSDKPKVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 83
Qy 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTPVNLLSAIRSPCQRETPEGAENPWYEPIYL 120
Db 84 QVLFKGQGPCSTHLLTHTTISRIVSYQTKVNLLSAIRSPCQRETPEGAENPWYEPIYL 143
Qy 121 GGVFQLEPGDRLSAEINRPDYLDFAESGVYFGIIAL 157
Db 144 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIIAL 180

RESULT 14

US-10-523-328-1
; Sequence 1, Application US/10523328
; Publication No. US20060078944A1
; GENERAL INFORMATION:
; APPLICANT: Kuai, Jun
; APPLICANT: Lin, Lih-Ling
; APPLICANT: Woeters, Joseph L.
; APPLICANT: Nickbarg, Elliot
; TITLE OF INVENTION: METHODS AND REAGENTS RELATING TO INFLAMMATION AND APOPTOSIS
; FILE REFERENCE: WYTH-P01-001
; CURRENT APPLICATION NUMBER: US/10/523,328
; CURRENT FILING DATE: 2005-02-01
; PRIOR APPLICATION NUMBER: 60/400,410
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 233
; TYPE: PRT

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; ORGANISM: Homo sapiens
US-10-523-328-1
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Best Local Similarity 96.2%; Pred. No. 2.2e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAGQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
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Db 77 VRSSRTPSDKPVAVHVANPQAGQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTVPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
   |||||
Db 137 QVLFKQGCPSHTVLLTHTTISRIVSYQTVPVNLLSAIRSPCORETPEGAEANPWYEPYIL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
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Db 197 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 233

RESULT 15
US-11-246-387-8
; Sequence 8, Application US/11246387
; Publication No. US20060078994A1
; GENERAL INFORMATION:
; APPLICANT: Argos Therapeutics, Inc.
; APPLICANT: Kirin Beer Kabushiki Kaisha
; APPLICANT: Healey, Don
; APPLICANT: Tcherepanova, Irina
; APPLICANT: Adams, Melissa
; APPLICANT: Hinojara, Atsushi
; TITLE OF INVENTION: MATURE DENDRITIC CELL COMPOSITIONS AND METHODS FOR CULTURING SAME
; FILE REFERENCE: MER030
; CURRENT APPLICATION NUMBER: US/11/246,387
; CURRENT FILING DATE: 2005-10-07
; PRIOR APPLICATION NUMBER: US 60/522,512
; PRIOR FILING DATE: 2004-10-07
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 8
; LENGTH: 233
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-246-387-8

Query Match          95.7%; Score 779; DB 11; Length 233;
Best Local Similarity 96.2%; Pred. No. 2.2e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDMPVAHVANPQAGQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||
Db 77 VRSSRTPSDKPVAVHVANPQAGQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136

QY 61 QVLFSGQGCPSHTVLLTHTTISRIVSYQTVPVNLLSAIRSPCORETPEGAEANPWYEPYIL 120
   |||||
Db 137 QVLFKQGCPSHTVLLTHTTISRIVSYQTVPVNLLSAIRSPCORETPEGAEANPWYEPYIL 196

QY 121 GGVFQLEPGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 197 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 233

Search completed: May 5, 2006, 11:28:33
Job time : 9.75 secs
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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:07 ; Search time 74.25 Seconds
(without alignments)
929.057 Million cell updates/sec

Title: US-10-668-178-15

Perfect score: 806

Sequence: 1 VRSSRTPSDAPVAHVANP.....RPDYLDFAESGVYFGIALL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

A_Geneseq_21.*
1: Geneseq1980s.*
2: Geneseq1990s.*
3: Geneseq2000s.*
4: Geneseq2001s.*
5: Geneseq2002s.*
6: Geneseq2003as.*
7: Geneseq2003bs.*
8: Geneseq2004s.*
9: Geneseq2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	778	96.5	157	2	AAR62465 Tumour ne
2	778	96.5	157	8	ADH10159 Human tum
3	777	96.4	157	1	AAP60524 Sequence
4	777	96.4	157	1	AAP70095 Tumour ne
5	777	96.4	157	1	AAP70144 Amino aci
6	777	96.4	157	2	AAR14270 Human TNF
7	777	96.4	157	2	AAR14112 Neutroph
8	777	96.4	157	2	AAR27747 Human tum
9	777	96.4	157	2	AAR42679 Human Tum
10	777	96.4	157	2	AAR38069 Human TNF
11	777	96.4	157	2	AAR62463 Tumour ne
12	777	96.4	157	2	AAR60243 Human TNF
13	777	96.4	157	2	AAR57437 Human tum
14	777	96.4	157	2	AAR28530 Human TNF
15	777	96.4	157	2	AAR40819 Human tum
16	777	96.4	157	2	ABB08912 Human tum
17	777	96.4	157	2	AAY23242 Human tum
18	777	96.4	157	4	AAG79124 Amino aci
19	777	96.4	157	4	AAE10848 Human tum
20	777	96.4	157	4	AAE10848 Human tum
21	777	96.4	157	4	AAE10848 Human tum
22	777	96.4	157	5	AAE18373 Human aci
23	777	96.4	157	5	AAE18373 Human aci
24	777	96.4	157	5	AAE18373 Human aci

25	777	96.4	157	5	ABG70571 Human tum
26	777	96.4	157	5	ABP54869 Human tum
27	777	96.4	157	5	AAB47940 Human tum
28	777	96.4	157	5	ABP54787 Human tum
29	777	96.4	157	5	ABG76348 Human ful
30	777	96.4	157	6	ABU09888 Human tum
31	777	96.4	157	6	ABG72947 Human tum
32	777	96.4	157	6	ABG75765 Human TNF
33	777	96.4	157	6	ABG75772 Human TNF
34	777	96.4	157	6	ABU63586 Human tum
35	777	96.4	157	7	ADC46568 Human tum
36	777	96.4	157	7	ADC61354 Human TNF
37	777	96.4	157	7	ADC81608 Human tum
38	777	96.4	157	7	ADB44654 Human tum
39	777	96.4	157	7	ADD89878 Human tum
40	777	96.4	157	7	ADG06773 Human ant
41	777	96.4	157	7	ADG02400 Human tum
42	777	96.4	157	7	ADG96348 Human tum
43	777	96.4	157	7	ADG02035 Human tum
44	777	96.4	157	7	ADF91146 Human tum
45	777	96.4	157	7	ADG27428 Human tum

ALIGNMENTS

RESULT 1

AAR62465

ID AAR62465 standard; protein; 157 AA.

XX AAR62465;

XX AC

DT 25-MAR-2003 (revised)

DT 05-JUN-1995 (first entry)

XX Tumour necrosis factor-alpha mutein K65A.

XX Human; tumour necrosis factor; TNF; TNF-a; expression; mutain; mutation;

KW receptor; affinity; therapeutic; diagnostic; cancer therapy; cancer;

KW obesity; septic shock; meningitis.

XX Synthetic.

XX Key Location/Qualifiers

FT Misc-difference 65

FT /label= Lys to Ala

XX EP619372-Al.

XX 12-OCT-1994.

PF 17-MAR-1994; 94EP-00104154.

PR 29-MAR-1993; 93EP-00810224.

XX (HOFF) HOFFMANN LA ROCHE & CO AG F.

XX Banner D, Lesslauer W, Loetscher H, Stueber D;

XX WPI; 1994-311810/39.

XX N-PSDB; AAQ87684.

XX New human TNF-a muteins with higher affinity for p75-TNFR - useful e.g.

XX for cancer therapy, treatment of obesity and toxic shock.

XX Claim 4; Page 15; 53pp; English.

XX The amino acid sequence of the mutated human tumour necrosis factor alpha (TNF-a). The mutein differs from the wild type at position 65 with a change from a Lys residue to a Ala residue. The gene encoding the protein is placed in the expression plasmid pDS56/RBSII and called pDS56/RBSII.SphI-TNFA(K65A). The expression of the wild type or mutein proteins is regulated by the lac repressor present on the plasmid pREP4.

CC The gene encoding the protein is mutated at specific sites resulting in a
 CC series of mutated proteins (AA62464-83 and AA63093-103). The biological
 CC activities of TNF are mediated via specific receptors of mol. wt. 55 and
 CC 75 kDa called p55-TNF-R and p75-TNF-R respectively. The mutated proteins
 CC presented have a higher affinity for the human p75-TNF receptor than for
 CC the p55-TNF receptor. The mutated proteins can be used in a variety of
 CC therapeutic or diagnostic applications including cancer therapy,
 CC treatment of obesity, septic shock or bacterial meningitis. (Updated on
 CC 25-MAR-2003 to correct PN field.)
 XX
 XX

XX Sequence 157 AA;

Query Match 96.5%; Score 778; DB 2; Length 157;

Best Local Similarity 96.2%; Pred. No. 1.4e-71;

Matches 151; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

DB 1 VRSSRTPSDKPAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLSSAISPQORETPEGAEALPWTEPIYL 120

DB 61 QVLFAGQGCPSHTVLLTHTISRIAVSYQTRVNLSSAISPQORETPEGAEALPWTEPIYL 120

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESQGVYFGIIAL 157

DB 121 GGVFOLEKGRLSAEINRPDYLDFAESQGVYFGIIAL 157

RESULT 2

ADH10159

ID ADH10159 standard; protein; 157 AA.

XX

AC ADH10159;

DT 11-MAR-2004 (first entry)

XX Human tumour necrosis factor variant protein.

DE TNF; tumour necrosis factor; polyethylene glycol; cytostatic; cancer;

XX human; variant.

XX Homo sapiens.

XX

XX Key Location/Qualifiers

FT Misc-difference 11

FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu

FT Misc-difference 65

FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu

FT Misc-difference 90

FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu

FT Misc-difference 98

FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu

FT Misc-difference 112

FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu

FT Misc-difference 128

FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu

XX EP1354893-A2.

XX

XX 22-OCT-2003.

XX 30-JAN-2003; 2003EP-00250587.

XX 25-MAR-2002; 2002JP-00083509.

XX 26-JUN-2002; 2002JP-00185387.

XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.

XX (MAYU) MAYUMI T.

XX (TSUT) TSUTSUMI Y.

XX (NAKA) NAKAGAWA S.

XX Mayumi T, Tsutsumi Y, Nakagawa S, Ikegami H;

XX

PI

XX

DR

XX

PT

PT

PT

PT

XX

PS

XX

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

XX

XX

QY

Best Local Similarity 96.2%;

Matches 151; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

DB 1 VRSSRTPSDKPAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLSSAISPQORETPEGAEALPWTEPIYL 120

DB 61 QVLFAGQGCPSHTVLLTHTISRIAVSYQTRVNLSSAISPQORETPEGAEALPWTEPIYL 120

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESQGVYFGIIAL 157

DB 121 GGVFOLEKGRLSAEINRPDYLDFAESQGVYFGIIAL 157

RESULT 3

AAP60524

ID AAP60524 standard; protein; 157 AA.

XX

AC AAP60524;

XX

DT 25-MAR-2003 (revised)

DT 07-AUG-1991 (first entry)

XX

DE

Sequence of tumour necrosis factor (TNF).

XX

KW

Anticancer agent; antitumour; antimalarial; tumour necrosis factor.

XX

OS

Oryctolagus cuniculus.

XX

PN

WO6603751-A.

XX

XX

XX

XX

XX

XX

XX

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XX

XX

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XX

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XX

XX WPI; 1986-182891/28.
DR N-PSDB; AAN60442.
XX Mammalian tumour necrosis factors - produced by culturing pro-karyotic
PT hosts transformed with recombinant DNA.
XX
PS Claim 11; Page 66; 93pp; English.
XX
CC TNF-like polypeptides and compans. are produced by the fermentation of
CC host cells transformed with at least one DNA sequence which codes for a
CC mammalian TNF-like polypeptide operatively linked to an expression
CC control sequence in the transformed host. (Updated on 25-MAR-2003 to
CC correct PA field.)
XX
SQ Sequence 157 AA;

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
DB 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60

QY 61 QVLFSGQGCPSTHVLTLTHTISRIASVYQTRVNLLSAIASPCQRETPEGAEALPWYEPIYL 120
DB 61 QVLFKGQCGPSTHVLTLTHTISRIASVYQTRVNLLSAIAKSPCQRETPEGAEALPWYEPIYL 120

QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 4
AAP70095
ID AAP70095 standard; protein; 157 AA.
XX
AC AAP70095;
XX
DT 04-APR-1991 (first entry)
XX
DE Tumour necrosis factor.
XX
KW Plasmid; tumour necrosis factor; antitumour agent.
XX
OS Escherichia coli.
XX
PN EP220482-A.
XX
PD 06-MAY-1987.
XX
PF 19-SEP-1986; 86BP-00112941.
XX
PR 30-SEP-1985; 85JP-00217740.
XX
PA (SUNR) SUNTORY LTD.
XX
PI Oshima T, Tanaka S, Matsukura S;
XX
DR WPI; 1987-124161/18.
XX
CC New plasmid for efficient tumour necrosis factor prodn. - comprises
PT plasmid with DNA fragment having phage-gene derived promoter region and E
PT coli derived transcription termination sequence.
XX
PS Claim 6; Page 17-18; 31pp; English.
XX
CC Tumour necrosis factor can be expressed using a plasmid comprising a
CC phage gene-derived promoter region upstream of the TNF structural gene
CC and an E.coli trp a gene terminator joined immediately downstream of a
CC base sequence encoding the termination of translation of the structural
CC gene. The plasmid is capable of efficient expression of TNF on a large
CC

CC scale and with high purity. The transformants may achieve a TNF activity
CC 40-300 times as great as with prior transformants. TNF may comprise at
CC least 40% of total cell protein. The plasmid lacks a pBR322 derived
CC repressor of primer gene. TNF is an antitumour agent
XX
SQ Sequence 157 AA;

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
DB 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60

QY 61 QVLFSGQGCPSTHVLTLTHTISRIASVYQTRVNLLSAIASPCQRETPEGAEALPWYEPIYL 120
DB 61 QVLFKGQCGPSTHVLTLTHTISRIASVYQTRVNLLSAIAKSPCQRETPEGAEALPWYEPIYL 120

QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 5
AAP70144
ID AAP70144 standard; protein; 157 AA.
XX
AC AAP70144;
XX
DT 03-OCT-2002 (revised)
XX
DT 13-MAY-1991 (first entry)
XX
DE Amino acid sequence of mature tumour necrosis factor (TNF).
XX
KW Tumour necrosis factor analogue; lymphokine; anti-tumour.
XX
OS Homo sapiens.
XX
PN EP220966-A.
XX
PD 06-MAY-1987.
XX
PF 30-OCT-1986; 86EP-00308484.
XX
PR 30-OCT-1985; 85US-00792815.
XX
PR 22-MAY-1986; 86US-00866213.
XX
PA (CETU) CETUS CORP.
XX
PI Lin LSL, Dorin G, Yamamoto R, Hanisch WH, Thomson JW, Wolfe SN;
XX
DR WPI; 1987-124486/18.
XX
PT Purified recombinant tumour necrosis factor compsn. - obtd. by using a
PT hydrophobic matrix to retain the factor followed by chromatographic
PT elution.
XX
PS Disclosure; Fig 3; 25pp; English.
XX
CC Specific examples of TNF analogues include N-terminally deleted species
CC of the protein, including those having deletions of the N-terminal
CC 1,2,3,4,5,6,7,8,9,10,14, and 31 AA's of the SQ in AAP70144. Muteins
CC lacking up to and including the first ten AA's at the N-terminus have
CC been found to have comparable or greater specific activities as compared
CC to the TNF of the SQ shown in AAP70144. Other muteins of TNF covered by
CC the method of the invention include species of TNF in which any or all of
CC the cysteine residues have been converted to serine or other neutral AA's
CC for example, glycine or alanine. In general, neutral AA replacements of
CC the cysteine at position 69 result in active TNF proteins. It appears
CC that the cysteine at position 101 is also dispensable. (Updated on 03-OCT
CC -2002 to add missing OS field.)
XX

```
SQ Sequence 157 AA;
Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSPDAPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLLSAISPQRETPEGAALPWYEPIYL 120
Db 61 QVLFKGQGCPSHTVLLTHTISRIAVSYQTRVNLLSAISPQRETPEGAALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFOLEKGRDLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 6
AAR14270
ID AAR14270 standard; peptide; 157 AA.
AC AAR14270;
DT 09-JAN-1992 (first entry)
XX Human TNF.
DE Tumour necrosis factor; cytotoxic; metastasis.
KW Homo sapiens.
OS
FH Key Location/Qualifiers
FT Peptide 1..18
FT /label= #301
FT Peptide 13..26
FT /label= #306
FT Peptide 22..40
FT /label= #307
FT Peptide 43..58
FT /label= #302
FT /note= "claim 2"
FT Peptide 54..68
FT /label= #308
FT /note= "claim 3"
FT Peptide 63..83
FT /label= #304
FT Peptide 70..80
FT /note= "claim 7"
FT Peptide 73..94
FT /label= #309
FT /note= "claim 5"
FT Peptide 79..89
FT /label= #323
FT Peptide 81..94
FT /note= "claim 6"
FT Peptide 94..109
FT /label= #303
FT Peptide 111..120
FT /label= #275
FT Peptide 132..150
FT /label= #305
FT /note= "claim 4"
XX WO9114702-A.
XX
XX 03-OCT-1991.
XX
XX 19-MAR-1990; 90AU-00009156.
XX
XX 19-MAR-1990; 90AU-00009156.
XX
XX 22-NOV-1990; 90AU-00003477.
XX
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```
XX (PEPT-) PEPTIDE TECHN LTD.
XX PA
XX Rathjen D, Aston R;
XX WPI; 1991-310534/42.
XX
XX New cytotoxic and/or proliferation-inhibiting polypeptide fragments -
XX useful in treatment of tumours with reduced side effects.
XX
XX Claim 1; Fig 1; 35pp; English.
XX
XX The peptide fragments indicated in the feature table have cytotoxic
XX and/or inhibition of proliferation effects on tumour cells. The peptides
XX may be co-administered with whole TNF alpha or with a cyto-toxic drug
XX
XX Sequence 157 AA;
Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSPDAPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLLSAISPQRETPEGAALPWYEPIYL 120
Db 61 QVLFKGQGCPSHTVLLTHTISRIAVSYQTRVNLLSAISPQRETPEGAALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFOLEKGRDLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 7
AAR14112
ID AAR14112 standard; peptide; 157 AA.
XX
XX AAR14112;
XX
XX 11-DEC-1991 (first entry)
XX
XX Neutrophil stimulating peptide.
XX
XX hTNF; AIDS; cancer; inflammatory syndromes; rheumatoid arthritis;
XX adult respiratory distress syndrome; human tumour necrosis factor.
XX
XX Synthetic.
XX
XX Key Location/Qualifiers
FT Peptide 1..18
FT /label= peptide 301
FT Peptide 13..26
FT /label= peptide 306
FT Peptide 22..40
FT /label= peptide 307
FT Peptide 43..58
FT /label= peptide 302
FT Peptide 54..68
FT /label= peptide 308
FT /note= "neutrophil stimulating activity and selective
FT effects on neutrophil degranulation"
FT Peptide 63..83
FT /label= peptide 304
FT /note= "neutrophil stimulating activity"
FT Peptide 70..80
FT /label= peptide 395
FT /note= "neutrophil stimulating activity"
FT Peptide 73..94
FT /label= peptide 309
FT /note= "neutrophil stimulating activity"
FT Peptide 76..84
```

```
FT Peptide /label= peptide 393
FT 79..89
FT /label= peptide 323
FT Peptide /label= peptide 394
FT 81..94
FT Peptide /label= peptide 396
FT 84..94
FT Peptide /label= peptide 303
FT 94..109
FT Peptide /label= peptide 275
FT 111..120
FT Peptide /label= peptide 305
FT 132..150
FT /label= peptide 305
XX W09113908-A.
XX
XX PN
XX PD 19-SEP-1991.
XX
XX PF 12-MAR-1990; 90AU-00009065.
XX
XX PR 12-MAR-1990; 90AU-00009065.
XX
XX PA (PEPT-) PEPTIDE TECHN LTD.
XX
XX PI Rathjen DA, Ferrante A;
XX
XX WPI; 1991-295580/40.
XX
XX New neutrophil stimulating peptide(s) derived from human TNF - useful for
XX treating depressed neutrophil function in e.g. AIDS and cancer, and
XX inflammatory syndrome in e.g. rheumatoid arthritis.
XX
XX Disclosure; Fig 1; 27pp; English.
XX
XX The amino acid sequence codes for human tumour necrosis factor. Peptides
XX derived from this sequence have neutrophil stimulating activity. The
XX peptides were synthesised using the Fmoc-polyamide method of solid
XX peptide synthesis. Treatment with the peptides can be used to restore
XX depressed or aberrant neutrophil activity without causing the side
XX effects associated with the therapeutic use of the whole TNF molecule.
XX Such peptides can be used in the treatment of individuals suffering from
XX AIDS, cancer or inflammatory syndromes e.g. rheumatoid arthritis or adult
XX respiratory distress syndrome
XX
XX SQ Sequence 157 AA;
XX
XX Query Match 96.4%; Score 777; DB 2; Length 157;
XX Best Local Similarity 96.2%; Pred. No. 1.8e-71;
XX Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
XX
QY 1 VRSSRTPSDAPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPKVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPCSTHVLTLTHTSIRIAVSYQTRVNLLSAISPQCRTPEGAEALPWYEPYIL 120
DB 61 QVLFKQGCPCSTHVLTLTHTSIRIAVSYQIKVNLLSAISKPCQRETPEGAEPWYEPYIL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
XX
XX RESULT 8
XX AAR27747
XX ID AAR27747 standard; protein; 157 AA.
XX
XX AC AAR27747;
XX
XX XX
XX DT 25-MAR-2003 (revised)
XX DT 03-MAR-1993 (first entry)
XX
XX XX
XX DE Human tumour necrosis factor alpha.
```

```
XX hTNF; monoclonal antibody; sepsis syndrome, cachexia, microbial;
XX infection; rheumatoid arthritis; inflammation.
XX
XX OS Homo sapiens.
XX
XX FH Key Location/Qualifiers
XX Region 1..20
XX /note= "putative receptor binding portion"
XX Region 11..13
XX /note= "putative receptor binding portion"
XX Region 37..42
XX /note= "putative receptor binding portion"
XX Region 49..57
XX /note= "putative receptor binding portion"
XX Region 59..80
XX /note= "epitope for Ab binding"
XX Region 87..108
XX /note= "epitope for Ab binding"
XX Region 155..157
XX /note= "putative receptor binding portion"
XX
XX W09216553-A1.
XX
XX PD 01-OCT-1992.
XX
XX PF 18-MAR-1992; 92WO-US002190.
XX
XX PR 18-MAR-1991; 91US-00670827.
XX
XX PA (UYNY ) UNIV NEW YORK STATE.
XX (CENZ ) CENTOCOR INC.
XX
XX PI Le J, Vilcek J, Daddona PE, Ghayeb J, Knight DM, Siegel SA;
XX
XX WPI; 1992-349155/42.
XX
XX Monoclonal and chimeric antibodies to human TNF - useful for treating
XX sepsis syndrome, cachexia, microbial infections, rheumatoid arthritis,
XX inflammation, etc.
XX
XX Claim 22; Page 77; 105pp; English.
XX
XX Anti-TNF antibodies were prepd. which bound to an epitope of at least 5
XX amino acids of residues 87-108 or both of residues 59-80 and 87-108 of
XX human tumour necrosis factor alpha, but do not bind known or putative
XX receptor binding portions of TNF, such as those shown in the features
XX table. The antibodies may be prepd. by hybridomas or recombinantly and
XX may be used for in vivo treatment and diagnosis of human pathologies
XX associated with TNF e.g. sepsis syndrome, cachexia, circulatory collapse
XX and shock resulting from acute or chronic bacterial infection, acute and
XX parasitic or infectious processes, including bacterial, viral and fungal
XX infections, acute and chronic immune and autoimmune pathologies such as
XX sarcoidosis and Crohn's disease, vascular inflammatory pathologies such
XX as disseminated intravascular coagulation, graft vs. host disease,
XX Kawasaki's disease and malignant tumours. The antibodies may be used in
XX combination with TNF therapy, e.g. cancer therapy to remove the undesired
XX side effects. They may also be used to remove TNF from fluids, tissues or
XX cells, to detect or quantitate TNF and for blocking TNF activity in vivo,
XX in situ and in vitro. (Updated on 25-MAR-2003 to correct PN field.)
XX (Updated on 25-MAR-2003 to correct PA field.)
XX
XX SQ Sequence 157 AA;
XX
XX Query Match 96.4%; Score 777; DB 2; Length 157;
XX Best Local Similarity 96.2%; Pred. No. 1.8e-71;
XX Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
XX
QY 1 VRSSRTPSDAPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPKVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPCSTHVLTLTHTSIRIAVSYQTRVNLLSAISPQCRTPEGAEALPWYEPYIL 120
```

```

Db      61 QVLFKGGCPSPTHVLLTHITISRIASVQTKVNLLSAISKSPCQRETPEGAEPWTEPIYL 120
Qy      121 GGVFQLETDGRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db      121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 9
AAR42679
ID AAR42679 standard; protein; 157 AA.
AC AAR42679;
XX
XX 25-MAR-2003 (revised)
DT 19-APR-1994 (first entry)
XX
XX Human Tumour Necrosis Factor alpha.
DE
XX Plasmid pDS56/RBSII, Sphi-TNF-alpha; mutein; inflammation; obesity;
KW septic shock; treatment; mutagenic PCR; cytokine.
XX
XX Homo sapiens.
OS
XX EP563714-A2.
PN
XX 06-OCT-1993.
PD
XX 20-MAR-1993; 93EP-00104591.
PF
XX 02-APR-1992; 92EP-00810249.
PR
XX (HOPF ) HOFFMANN LA ROCHE & CO AG F.
PA
XX
XX Lesalauer W, Loetscher H, Stueber D;
PI
XX WPI; 1993-313109/40.
DR
XX N-PSDB; AAQ49223.
XX
XX New human Tumour Necrosis Factor mutein(s) - have amino acid change at
PT position 86, for selective binding affinity to the P55-TNF-Receptor.
PT
XX Disclosure; Fig 1b; 29pp; English.
XX
XX The human TNF-alpha expression plasmid pDS56/RBSII, Sphi-TNF-alpha was
CC used as the source of TNF-alpha gene for preparing the various TNF-alpha
CC mutants of the invention. Mutagenic PCR was used on the wild-type
CC template to introduce amino acid substitutions at sites affecting binding
CC specificity. The mutants retain binding activity to the human p55-TNF-
CC Receptor but do not bind to the human p75-TNF-Receptor. Consequently,
CC the mutants have lower systemic toxicity and only elicit some of the
CC activities of wild-type TNF-a. (Updated on 25-MAR-2003 to correct PN
CC field.)
XX
SQ Sequence 157 AA;
Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy      1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db      1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Qy      61 QVLFSGGCGCPSPTHVLLTHITISRIASVQTKVNLLSAISKSPCQRETPEGAEPWTEPIYL 120
Db      61 QVLFKGGCPSPTHVLLTHITISRIASVQTKVNLLSAISKSPCQRETPEGAEPWTEPIYL 120

Qy      121 GGVFQLETDGRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db      121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 11
AAR62463
ID AAR62463 standard; protein; 157 AA.
XX
XX AAR62463;
XX
XX 25-MAR-2003 (revised)
DT 02-JUN-1995 (first entry)
XX

```

```

RESULT 10
AAR38069
ID AAR38069 standard; protein; 157 AA.
XX
XX AAR38069;
XX
XX 14-OCT-1993 (first entry)
DT
XX Human TNF-alpha.
DE
XX Withdrawal symptom; tumour necrosis factor; narcotic; nicotine; morphine;
KW thymosin; alcohol.
XX
XX Homo sapiens.
OS
XX JP05117161-A.
PN
XX 14-MAY-1993.
PD
XX 23-OCT-1991; 91JP-00337489.
PF
XX 23-OCT-1991; 91JP-00337489.
PR
XX (SOMA/) SOMA G.
PA (MIZU/) MIZUNO D.
XX
XX WPI; 1993-191442/24.
DR
XX
XX Drugs for treating alcohol, morphine narcotics or nicotine withdrawal
PT symptoms - contg. tumour necrosis factor-alpha, thymosin tumour necrosis
PT factor fused cpd. or murine tumour necrosis factor-alpha prepd. from
PT macrophage of human or animal.
XX
XX Disclosure; Page 2-3; 5pp; Japanese.
XX
XX Drugs acting on withdrawal symptoms contain TNF, esp. TNF-alpha (AAR38069
CC and AAR38077), rTNF-S-AM1 (AAR38070), rTNF-S-AM2 (AAR38071), thymosin-
CC beta4-TNF fused cpd. (AAR38072-76). The drugs are effective in treatment
CC of withdrawal symptoms caused by habitual use of alcohol, morphine
CC narcotics or nicotine in humans or animals (e.g. swine, dog, cat,
CC chicken). The drugs may be administered as TNF at a dose of 10ng-10mg
CC orally or 5ng-1mg i.v. or 50ng-50mg percutaneously a day for a human
CC adult. In animals, the drugs may be administered according to the human
CC dosage (1/60 per kg body wt.)
XX
XX Sequence 157 AA;
SQ
Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy      1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db      1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60

Qy      61 QVLFSGGCGCPSPTHVLLTHITISRIASVQTKVNLLSAISKSPCQRETPEGAEPWTEPIYL 120
Db      61 QVLFKGGCPSPTHVLLTHITISRIASVQTKVNLLSAISKSPCQRETPEGAEPWTEPIYL 120

Qy      121 GGVFQLETDGRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db      121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 11
AAR62463
ID AAR62463 standard; protein; 157 AA.
XX
XX AAR62463;
XX
XX 25-MAR-2003 (revised)
DT 02-JUN-1995 (first entry)
XX

```

DE Tumour necrosis factor-alpha protein.
XX
KW Human: tumour necrosis factor; TNF; TNF-a; expression; mutein; mutation;
KW receptor; affinity; therapeutic; diagnostic; cancer therapy; cancer;
KW obesity; septic shock; meningitis.
XX
OS Homo sapiens.
XX
PN EP619372-A1.
XX
PD 12-OCT-1994.
XX
PF 17-MAR-1994; 94EP-00104154.
XX
PR 29-MAR-1993; 93EP-00810224.
XX
PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
XX
PI Banner D, Lesslauer W, Loetscher H, Stueber D;
XX WPI; 1994-311810/39.
DR N-PSDB; AAQ73431.
XX
PT New human TNF-a muteins with higher affinity for p75-TNFR - useful e.g.
PT for cancer therapy, treatment of obesity and toxic shock.
XX
PS Disclosure; Page 28-31; 53pp; English.
XX
CC The amino acid sequence of the human wild type tumour necrosis factor
CC alpha (TNF-a). The gene encoding the protein is placed in the expression
CC plasmid pDS56/RBSII and called pDS56/RBSII, Sphi-TNFA. The expression of
CC the wild type or mutant proteins is regulated by the lac repressor
CC present on the plasmid pREP4. The gene encoding the protein is mutated at
CC specific sites resulting in series of mutated proteins (AAR62464-83 and
CC AAR63093-103). The biological activities of TNF are mediated via specific
CC receptors of mol. wt. 55 and 75 kDa called p55-TNF-R and p75-TNF-R
CC respectively. The mutated protein presented have a higher affinity for
CC the human p75-TNF receptor than for the p55-TNF receptor. The mutated
CC proteins can be used in a variety of therapeutic or diagnostic
CC applications including cancer therapy, treatment of obesity, septic shock
CC or bacterial meningitis. (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ Sequence 157 AA;

Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDAPVAHVAVNPQAGQQLWLNRRNALLANGVELRDQLVVPSEGLYIYS 60
DB 1 VRSSSRTPSDKPAHVAVNPQAGQQLWLNRRNALLANGVELRDQLVVPSEGLYIYS 60
QY 61 QVLFSGQGCPTSHVLLTHTISRIASVYQTRVNLLSAISPQRETPEGAEALPWYEPYVL 120
DB 61 QVLFSGQGCPTSHVLLTHTISRIASVYQTRVNLLSAISPQRETPEGAEALPWYEPYVL 120
QY 121 GGVFQLEKGRDLSAEINRPDYLDPASGQVYFGIALL 157
DB 121 GGVFQLEKGRDLSAEINRPDYLDPASGQVYFGIALL 157

RESULT 12
AAR60243
ID AAR60243 standard; peptide; 157 AA.
XX
AC AAR60243;
XX
XX
DT 25-MAR-2003 (revised)
DT 16-MAR-1995 (first entry)
XX
XX Human TNF-alpha.
XX
KW TNF-alpha; tumor necrosis factor-alpha; tip peptide; mutein; cancer;

KW sepsis; inflammation; cytokine; metastasis; lectin; adhesion;
KW mutagenesis.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Misc-difference 1..8
FT /note= "in TNF muteins, residues 1-8 are replaced by a
FT peptide within the region spanning aa 5-30 of laminin"
FT
FT Misc-difference 101
FT /note= "in TNF muteins, residue 101 is Ser"
FT
FT Misc-difference 102
FT /note= "in TNF muteins, residue 102 is Arg or deleted"
FT
FT Misc-difference 103
FT /note= "in TNF muteins, residue 103 is Trp"
FT
FT Misc-difference 105
FT /note= "in TNF muteins, residue 105 is Pro or Ile or
FT residue 105 is Ile and residue 44 is Cys"
FT
FT Misc-difference 106
FT /note= "in TNF muteins, residue 106 is Ser, or residue
FT 106 is Ser and residue 131 is Cys"
FT
FT Misc-difference 108
FT /note= "in TNF muteins, residue 108 is Phe"
FT
FT Misc-difference 110
FT /note= "in TNF muteins, residue 110 is Lys"
FT
FT Misc-difference 111..112
FT /note= "in TNF muteins, residues 111-112 are deleted, or
FT residue 111 is deleted or Met, or residue 111 is deleted
FT and residue 109 is Gln and residue 120 is His"
FT
FT Misc-difference 115..116
FT /note= "in TNF muteins, residues 115-116 are Ile-Lys"
FT
FT Misc-difference 115
FT /note= "in TNF muteins, residue 115 is Ile or Cys"
FT
FT Misc-difference 116
FT /note= "in TNF muteins, residue 116 is Lys, His or Val"
FT
XX W09418325-A1.
XX
XX 18-AUG-1994.
XX
XX 02-FEB-1994; 94WO-EP000286.
XX
XX 03-FEB-1993; 93EP-00400262.
XX
XX (INNO-) INNOGENETICS NV SA.
XX
XX Lucas R, De Baetselier P, Franssen L, Sablon E;
XX WPI; 1994-279746/34.
XX
XX New tumour necrosis factor -alpha muteins, antibodies and antisense
XX peptide(s) - used in the treatment of diseases and conditions associated
XX with the in vivo activities of TNF-A eg cancer, sepsis, inflammation,
XX etc.
XX
XX Disclosure; Page 10; 132pp; English.
XX
XX TNF-alpha muteins were constructed in the tip region (given in AAR60231)
XX of human TNF-alpha. The mutations resulted in: modulation of lectin-like
XX activity; reduced toxic activity; modulation of inflammatory activity;
XX modulated adhesion molecule inducing capacity; reduced metastasis
XX promoting activity; and/or increased half-life. Muteins of the mouse TNF
XX (given in AAR60244) may also be produced. (Updated on 25-MAR-2003 to
XX correct PN field.)
XX
XX Sequence 157 AA;
SQ

Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDAPVAHVAVNPQAGQQLWLNRRNALLANGVELRDQLVVPSEGLYIYS 60
DB 1 VRSSSRTPSDKPAHVAVNPQAGQQLWLNRRNALLANGVELRDQLVVPSEGLYIYS 60
QY 61 QVLFSGQGCPTSHVLLTHTISRIASVYQTRVNLLSAISPQRETPEGAEALPWYEPYVL 120
DB 61 QVLFSGQGCPTSHVLLTHTISRIASVYQTRVNLLSAISPQRETPEGAEALPWYEPYVL 120
QY 121 GGVFQLEKGRDLSAEINRPDYLDPASGQVYFGIALL 157
DB 121 GGVFQLEKGRDLSAEINRPDYLDPASGQVYFGIALL 157

RESULT 12
AAR60243
ID AAR60243 standard; peptide; 157 AA.
XX
AC AAR60243;
XX
XX
DT 25-MAR-2003 (revised)
DT 16-MAR-1995 (first entry)
XX
XX Human TNF-alpha.
XX
KW TNF-alpha; tumor necrosis factor-alpha; tip peptide; mutein; cancer;

Db 1 VRSSRTPSDKPAHVAVNPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWTEPIYL 120
Db 61 QVLFKGGQGPCSTHLLTHTISRIAVSYQTKVNLLSAISPQORETPEGAEAKPWTEPIYL 120
Qy 121 GGVFOLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 121 GGVFOLEKGRLSAEINRPDYLDFAESGGVYFGIIAL 157

RESULT 13
ID AARS7437
XX AARS7437 standard; protein; 157 AA.
AC AARS7437;
XX
DT 25-MAR-2003 (revised)
DT 13-MAR-1995 (first entry)
XX
DE Human tumour necrosis factor (wild-type).
XX
KW Tumour necrosis factor; TNF; mutein; variant; antitumour; toxicity;
KW haemorrhagic necrosis; antiviral; parasite; malaria.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Misc-difference 1..7 /note= "one or more of the first 7 N-terminal amino acids
FT may be deleted"
FT
FT Misc-difference 4 /note= "Ser pref. replaced by Arg"
FT
FT Misc-difference 5 /note= "Ser pref. replaced by Arg"
FT
FT Misc-difference 6 /note= "Arg pref. replaced by Ala"
FT
FT Misc-difference 7 /note= "Thr pref. replaced by His or Lys"
FT
FT Misc-difference 8 /note= "Pro pref. replaced by Arg"
FT
FT Misc-difference 9 /note= "Ser pref. replaced by Lys"
FT
FT Misc-difference 10 /note= "Asp pref. replaced by Arg"
FT
FT Misc-difference 38 /note= "Ala pref. replaced by Asp"
FT
FT Misc-difference 39 /note= "Asn pref. replaced by Asp, Lys or Val"
FT
FT Misc-difference 40 /note= "Gly pref. replaced by Asp, Lys or Val"
FT
FT Misc-difference 41 /note= "Val pref. replaced by Ser"
FT
FT Misc-difference 52 /note= "Ser pref. replaced by Ile, Glu or Lys"
FT
FT Misc-difference 53 /note= "Glu pref. replaced by Lys or Leu"
FT
FT Misc-difference 54 /note= "Gly pref. replaced by Asp or Val"
FT
FT Misc-difference 56 /note= "Tyr pref. replaced by Phe or Glu"
FT
FT Misc-difference 85 /note= "Val pref. replaced by Glu or Arg"
FT
FT Misc-difference 86 /note= "Ser pref. replaced by Leu, Lys, Glu or Asp"
FT
FT Misc-difference 87 /note= "Tyr pref. replaced by Glu or Arg"
FT
FT Misc-difference 88 /note= "Gln pref. replaced by Glu"
FT
FT Misc-difference 127 /note= "Glu pref. replaced by Ala, Val or Lys"
FT
FT Misc-difference 128 /note= "Lys pref. replaced by Ala, Val or Glu"
FT

FT Misc-difference 129 /note= "Gly pref. replaced by Glu, Lys or Val"
FT
FT Misc-difference 156 /note= "Ala pref. replaced by Asp"
FT
FT Misc-difference 157 /note= "Leu pref. replaced by Phe"
FT
XX DE4404124-Al.
XX
XX 11-AUG-1994.
PD
XX
XX 09-FEB-1994; 94DE-04404124.
PF
XX 09-FEB-1993; 93KR-00001751.
PR
XX (HANI-) HANIL SYNTHETIC FIBER CO LTD.
PA
XX Shin H, Shin N, Lee I, Kang S;
PI
XX WPI: 1994-250457/31.
DR
DR N-PSDB; AAQ67089.
XX
XX New tumour necrosis factor muteins and related DNA - also vectors and
FT transformed cells, with increased antitumour activity and lower toxicity
FT than wild type protein.
XX
XX Claim 1; Page 20; 23pp; German.
XX
XX TNF muteins are claimed, in which at least one amino acid at positions 4-
CC 10, 38-41, 52-54, 56, 85-88, 127-129, 156 or 157 is exchanged for a
CC different amino acid. Opt. one or more of the first 7 N-terminal amino
CC acids is deleted. TNF causes haemorrhagic necrosis of tumours; has anti-
CC viral activity and inactivates some species of malarial parasites. The
CC muteins have increased antitumour activity and lower toxicity than wild-
CC type protein. (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ Sequence 157 AA;
Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
Qy 1 VRSSRTPSDAPVAHVAVNPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPAHVAVNPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGPCSTHLLTHTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWTEPIYL 120
Db 61 QVLFKGGQGPCSTHLLTHTISRIAVSYQTKVNLLSAISPQORETPEGAEAKPWTEPIYL 120
Qy 121 GGVFOLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
Db 121 GGVFOLEKGRLSAEINRPDYLDFAESGGVYFGIIAL 157
RESULT 14
AAW28530
ID AAW28530 standard; protein; 157 AA.
XX
XX AAW28530;
AC
DT 25-MAR-2003 (revised)
DT 11-JAN-1998 (first entry)
XX
XX Human TNF.
DE
XX TNF; tumour necrosis factor; Crohn's disease; cA2 antibody.
KW
XX Homo sapiens.
OS
XX Key Location/Qualifiers
FH 11..13
FT Region /label= epitope
FT

FT Region 37. .42
 FT /label= epitope
 FT Region 49. 57
 FT /label= epitope
 FT Region 59. .80
 FT /label= epitope
 FT Region 87. .108
 FT /label= epitope
 FT Region 155. .157
 FT /label= epitope
 XX
 PN US5656272-A.
 XX
 XX 12-AUG-1997.
 XX
 XX 04-FEB-1994; 94US-00192102.
 XX
 XX 18-MAR-1991; 91US-00670827.
 PR 18-MAR-1992; 92US-00853606.
 PR 11-SEP-1992; 92US-00943852.
 PR 26-JAN-1993; 93US-00010406.
 PR 02-FEB-1993; 93US-00013413.
 XX
 (CENZ) CENTOCOR INC.
 PA (UYNV-) UNIV NEW YORK MEDICAL CENT.
 PA
 XX Dadonna P, Le J, Ghayeb J, Knight D, Siegel SA, Vilcek J;
 PI WPI; 1997-414547/38.
 XX
 XX Treatment of Crohn's disease - by administering humanised cA2 antibody
 PT specific for tumour necrosis factor.
 XX
 XX Claim 4 and 6; Fig 13; 87pp; English.
 PS
 XX An anti-TNF chimeric antibody may be administered for treating TNF-alpha
 CC mediated Crohn's disease in a human. The anti-TNF chimeric antibody
 CC competitively inhibits binding of TNF to monoclonal antibody cA2. The
 CC anti-TNF antibody does not bind to one or more epitopes in amino acids 11
 CC -13, 37-42, 49-57 or 155-157 of hTNF, but does bind to one or more
 CC epitopes included in amino acids between 87-108 or both 87-108 and 59-80
 CC of hTNF. (Updated on 25-MAR-2003 to correct PF field.)
 XX
 SQ Sequence 157 AA;
 Query Match 96.4%; Score 777; DB 2; Length 157;
 Best Local Similarity 96.2%; Pred. No. 1.8e-71;
 Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDAPVAHVAVNPQAGQQLWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
 DB 1 VRSSRTPSDKPKVAHVAVNPQAGQQLWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
 QY 61 QVLFSGGCGCPSTHVLTTHTISRIAVSYQTRVNLSSAISPQRETPEGALPWPYPIYL 120
 DB 61 QVLFKGGCGCPSTHVLTTHTISRIAVSYQTKVNLSSAISPQRETPEGAKWPYPIYL 120
 QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
 DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
 RESULT 15
 AAW40819
 ID AAW40819 standard; peptide; 157 AA.
 AC
 XX AAW40819;
 XX
 DT 02-APR-1998 (first entry)
 XX
 XX Human tumour necrosis factor.
 DE
 XX Tumour necrosis factor; human; hTNF; rheumatoid arthritis; malignancy;
 KW

anti-TNF chimeric antibody; inhibitor; diagnosis; infection;
 chronic inflammatory disease; autoimmune disease;
 neurodegenerative disease.
 OS Homo sapiens.
 XX
 Key Location/Qualifiers
 FT Misc-difference 59. .80
 FT /note= "epitope recognised by antibody of the invention"
 FT Misc-difference 87. .108
 FT /note= "epitope recognised by antibody of the invention"
 FT
 XX US5698195-A.
 XX
 XX 16-DEC-1997.
 XX
 XX 18-OCT-1994; 94US-00324799.
 XX
 XX 18-MAR-1991; 91US-00670827.
 PR 18-MAR-1992; 92US-00853606.
 PR 11-SEP-1992; 92US-00943852.
 PR 29-JAN-1993; 93US-00010406.
 PR 02-FEB-1993; 93US-00013413.
 PR 04-FEB-1994; 94US-00192061.
 PR 04-FEB-1994; 94US-00192093.
 PR 04-FEB-1994; 94US-00192102.
 XX
 (CENZ) CENTOCOR INC.
 PA (UYNV-) UNIV NEW YORK MEDICAL CENT.
 PA
 XX Siegel S, Knight D, Vilcek J, Ghayeb J, Le J, Daddona P;
 PI WPI; 1998-051431/05.
 XX
 XX Treatment of rheumatoid arthritis - with chimeric antibody directed
 PT against tumour necrosis factor.
 XX
 XX Claim 3; Col 97-100; 93pp; English.
 PS
 XX This sequence represents the human tumour necrosis factor (hTNF).
 CC Epitopes of this sequence are recognised by the antibody used in the
 CC method of the invention. The method of the invention is for treating
 CC rheumatoid arthritis in a human, and comprises administering to the human
 CC an effective TNF-inhibiting amount of an anti-TNF chimeric antibody (Ab),
 CC where the anti-TNF chimeric Ab comprises a non-human variable region or a
 CC TNF antigen binding portion of the variable region, and a human constant
 CC region. The method can be used for in vitro, in situ and/or in vivo
 CC diagnosis and/or treatment of animal cells, tissues or pathologies
 CC associated with the presence of TNF. The Abs used in the method can also
 CC be used for removing TNF from a solution or cells, inhibiting one or more
 CC biological activities of TNF in vitro, in situ or in vitro. Such removal
 CC can include treatment methods of the invention for alleviating symptoms
 CC or pathologies involving TNF, such as bacterial, viral or parasitic
 CC infections, chronic inflammatory diseases, autoimmune diseases,
 CC malignancies and/or neurodegenerative diseases
 XX
 SQ Sequence 157 AA;
 Query Match 96.4%; Score 777; DB 2; Length 157;
 Best Local Similarity 96.2%; Pred. No. 1.8e-71;
 Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDAPVAHVAVNPQAGQQLWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
 DB 1 VRSSRTPSDKPKVAHVAVNPQAGQQLWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
 QY 61 QVLFSGGCGCPSTHVLTTHTISRIAVSYQTRVNLSSAISPQRETPEGALPWPYPIYL 120
 DB 61 QVLFKGGCGCPSTHVLTTHTISRIAVSYQTKVNLSSAISPQRETPEGAKWPYPIYL 120
 QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
 DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157

Search completed: May 5, 2006, 11:26:33
Job time : 74.25 secs

GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:42 ; Search time 18 Seconds
(without alignments)
839.224 Million cell updates/sec

Title: US-10-668-178-15

Perfect score: 806

Sequence: 1 VRSSRTSPDAPVAHVANP.....RPDYLDFASSGVYFGIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

PIR 80.*

1: Piri.*

2: Piri.*

3: Piri.*

4: Piri.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	777	96.4	233	1 QWHUN	tumor necrosis fac
2	770	95.5	233	1 S22052	tumor necrosis fac
3	710	88.1	233	2 S11688	tumor necrosis fac
4	695	86.2	234	1 JQ1344	tumor necrosis fac
5	675.5	83.8	232	1 S12606	tumor necrosis fac
6	637.5	79.1	234	1 A25451	tumor necrosis fac
7	632.5	78.5	235	1 QWMSN	tumor necrosis fac
8	629	78.0	185	2 S52715	tumor necrosis fac
9	629	78.0	233	1 S24642	tumor necrosis fac
10	627	77.8	234	1 JH0529	tumor necrosis fac
11	626.5	77.7	235	2 S15490	tumor necrosis fac
12	622.5	77.2	193	2 S06152	tumor necrosis fac
13	617.5	76.6	235	2 JU0029	tumor necrosis fac
14	257.5	31.9	197	1 JH0309	tumor necrosis fac
15	252	31.3	204	1 S24641	lymphotoxin - bovi
16	246.5	30.6	204	1 S17289	tumor necrosis fac
17	240	29.8	202	1 JN0869	tumor necrosis fac
18	238.5	29.6	202	1 B27303	tumor necrosis fac
19	214.5	26.6	205	1 QWYUX	lymphotoxin alpha
20	166	20.6	244	2 A46066	lymphotoxin beta -
21	165.5	20.5	278	2 A49266	fas ligand - rat
22	159.5	19.8	279	2 A53062	fas ligand - mouse
23	151	18.7	281	2 I38707	fas ligand - human
24	142	17.6	306	2 I49139	lymphotoxin-beta
25	128	15.9	260	2 S21738	CD40 ligand - mous
26	121	15.0	261	2 I53476	CD40 ligand - huma
27	118	14.6	261	2 S53090	CD40 ligand - bovi
28	81.5	10.1	887	2 AD2009	hypothetical prote
29	78.5	9.7	724	2 A53371	glutamate-ammonia

ALIGNMENTS

RESULT 1

QWHUN

tumor necrosis factor alpha precursor [validated] - human
N;Alternate names: cachectin; TNFA

C;Species: Homo sapiens (man)

C;Date: 28-Aug-1985 #sequence revision 28-Aug-1985 #text change 09-Jul-2004

C;Accession: A93585; S36153; A93351; A44189; B61478; I53311; S62610; I54522; A01646; B2

R;Nedwin, G.E.; Naylor, S.L.; Sakaguchi, A.Y.; Smith, D.; Jarrett-Nedwin, J.; Pennica,

Nucleic Acids Res. 13, 6361-6373, 1985

A;Title: Human lymphotoxin and tumor necrosis factor genes: structure, homology and chr

A;Reference number: A93585; MUID:86016093; PMID:2995927

A;Accession: A93585

A;Molecule type: DNA

A;Residues: 1-233 <NED>

A;Cross-references: UNIPROT:P01375; UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:93

R;Iris, F.J.M.; Bouguetere, L.; Frieur, S.; Caterina, D.; Primas, G.; Perrot, V.; Jurk

Nature Genet. 3, 137-145, 1993

A;Title: Dense Alu clustering and a potential new member of the NFkappaB family within

A;Reference number: S36152; MUID:93272029; PMID:8499947

A;Accession: S36153

A;Status: nucleic acid sequence not shown; translation not shown

A;Molecule type: DNA

A;Residues: 1-233 <IRI>

A;Cross-references: UNIPARC:UPI000000D745; EMBL:Z15026; NID:g37211; PIDN:CAA78745.1; PI

A;Note: the nucleotide sequence was submitted to the EMBL Data Library, August 1992

R;Pennica, D.; Nedwin, G.E.; Hayflick, J.S.; Seeburg, P.H.; Derynck, R.; Palladino, M.A

Nature 312, 724-729, 1984

A;Title: Human tumour necrosis factor: precursor structure, expression and homology to

A;Reference number: A93351; MUID:85086244; PMID:6392892

A;Accession: A93351

A;Molecule type: mRNA

A;Residues: 1-233 <PEN>

A;Cross-references: UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:g37209; PIDN:CAA26

A;Note: this protein was isolated from the monocytic-like cell line HL-60 from a promyel

R;Wang, A.M.; Creasey, A.A.; Ladner, M.B.; Lin, L.S.; Strickler, J.; Van Arsdel, J.N.;

Science 228, 149-154, 1985

A;Title: Molecular cloning of the complementary DNA for human tumor necrosis factor.

A;Reference number: A44189; MUID:85142190; PMID:3956324

A;Accession: A44189

A;Molecule type: mRNA

A;Residues: 1-62, 'S', 64-233 <WAN>

A;Cross-references: UNIPARC:UPI000002FB8A; GB:M10988; NID:g339737; PIDN:AAA61198.1; PID

R;Fukuda, S.; Ando, S.; Sanou, O.; Tanai, M.; Masaki, N.; Nakamura, K.I.;

Lymphokine Res. 7, 175-185, 1988

A;Title: Simultaneous production of natural human tumor necrosis factor-alpha, -beta ar

A;Reference number: A61478; MUID:88301617; PMID:2841543

A;Accession: B61478

A;Molecule type: protein

A;Residues: 83-102; 109-119; 121-128, 'X', 130-131; 142-144, 'X', 146, 'XXX', 150-152; 159-174; 18

A;Cross-references: UNIPARC:UPI00001735C7; UNIPARC:UPI00001735C8; UNIPARC:UPI00001735C9

R;Marmenout, A.; Fransen, L.; Tavernier, J.; Van Der Heyden, J.; Tizard, R.; Kawashima,

Eur. J. Biochem. 152, 515-522, 1985


```
||||| 197 GGVFQLEKGDRLSTELNPAYLDFAGSGQVYFGIIAL 233

RESULT 4
JQ1344
tumor necrosis factor alpha precursor - horse
N:Alternate names: cachectin; TNF alpha
C:Species: Equus caballus (domestic horse)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: JQ1344
R:Su, X.; Morris, D.D.; McGraw, R.A.
Gene 107, 319-321, 1991
A:Title: Cloning and characterization of gene TNF alpha encoding equine tumor necrosis fa
A:Reference number: JQ1344; MUID:92084125; PMID:1748301
A:Accession: JQ1344
A:Molecule type: DNA
A:Residues: 1-234 <SUX>
A:CROSS-references: UNIPROT:P29553; UNIPARC:UPI00001370BF; GB:M64087; NID:g164244; PIDN:
C:Comment: This protein is an important proximal mediator of endotoxemia.
C:Genetics:
A:Gene: TNF-alpha
A:Introns: 62/3; 79/1; 95/1
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; memb
F:17-234/Product: tumor necrosis factor alpha #status predicted <TUM>
F:19-20/Binding site: myristate (Lys) (covalent) #status predicted
F:82/Binding site: carboxylate (Ser) (covalent) #status predicted
F:146-178/Disulfide bonds: #status predicted

Query Match 86.2%; Score 695; DB 1; Length 234;
Best Local Similarity 85.4%; Pred. No. 2.5e-63;
Matches 134; Conservative 11; Mismatches 12; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
78 LRSSRTPSDKPVAVHVANPQAEGLQWLSGRANALLANGVKLTQNLVPLDGLYLIYS 137
QY 61 QVLFSGQGCPSHTVLLTHTISRTAVSYQTRVNLLSAISPCCQRETPEGAALPWTPEIYL 120
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 138 QVLFSGQGCPSHTVLLTHTISRLVAVSPKVNLLSAIKSPCHTESPEQAEAKPWPEIYL 197

QY 121 GGVFQLETDRLSAEINRPDYLDFAESGQVYFGIIAL 157
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 198 GGVFQLEKGDRLSAEINQPNLYLDFAGSGQVYFGIIAL 234

RESULT 5
S12606
tumor necrosis factor alpha precursor - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: S12606; S17290; S18965; I46659
R:Drews, R.T.; Coffee, B.W.; Prestwood, A.K.; McGraw, R.A.
Nucleic Acids Res. 18, 5564, 1990
A:Title: Gene sequence of porcine tumor necrosis factor alpha.
A:Reference number: S12606; MUID:91016861; PMID:2216741
A:Accession: S12606
A:Molecule type: DNA
A:Residues: 1-232 <DRE>
A:CROSS-references: UNIPROT:P23563; UNIPARC:UPI00001370C6; EMBL:X54001; NID:g2135; PIDN:
R:Kuhert, P.; Wuehrich, C.; Peterhans, E.; Pauli, U.
Gene 102, 171-178, 1991
A:Title: The porcine tumor necrosis factor-encoding genes: sequence and comparative anal
A:Reference number: S17289; MUID:91340150; PMID:1874444
A:Accession: S17290
A:Molecule type: DNA
A:Residues: 1-232 <KUH>
A:CROSS-references: UNIPARC:UPI00001370C6; EMBL:X54859; NID:g2132; PIDN:CAA38639.1; PID:
A:Note: the authors translated the codon GAG for residue 202 as Gly
R:Choi, C.S.; Molitor, T.W.; Lin, G.F.; Murtough, M.P.
submitted to the EMBL Data Library, January 1991
A:Description: Complete nucleotide sequence of a cDNA encoding porcine tumor necrosis fa
```

```
A:Reference number: S18965
A:Accession: S18965
A:Molecule type: mRNA
A:Residues: 1-232 <CHO>
A:CROSS-references: UNIPARC:UPI00001370C6; EMBL:X57321; NID:g2137; PIDN:CAA40591.1; PID:
R:Pauli, U.; Beutler, B.; Peterhans, E.
Gene 81, 185-191, 1989
A:Title: Porcine tumor necrosis factor alpha: Cloning with the polymerase chain reaction.
A:Reference number: I46659; MUID:90034181; PMID:2478420
A:Accession: I46659
A:Status: preliminary; translated from GB/EMBL/DBDJ
A:Molecule type: mRNA
A:Residues: 44-232 <PAU>
A:CROSS-references: UNIPARC:UPI000016C6F7; GB:M29079; NID:g164694; PIDN:AAA31128.1; PID:
C:Genetics:
A:Introns: 62/3; 78/1; 93/1
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; myr
F:1-77/Domain: propeptide #status predicted <PRO>
F:78-232/Product: tumor necrosis factor alpha #status predicted <MAT>
F:19-20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carboxylate (Ser) (covalent) #status predicted
F:144-176/Disulfide bonds: #status predicted

Query Match 83.8%; Score 675.5; DB 1; Length 232;
Best Local Similarity 85.4%; Pred. No. 2.4e-61;
Matches 134; Conservative 10; Mismatches 12; Indels 1; Gaps 1;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
77 LRSSRTPSDKPVAVHVANPQAEGLQWQSGVANALLANGVKLNQNLVPLDGLYLIYS 135
QY 61 QVLFSGQGCPSHTVLLTHTISRTAVSYQTRVNLLSAISPCCQRETPEGAALPWTPEIYL 120
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 136 QVLFSGQGCPSHTVLLTHTISRTAVSYQTRVNLLSAISPCCQRETPEGAALPWTPEIYL 195
QY 121 GGVFQLETDRLSAEINRPDYLDFAESGQVYFGIIAL 157
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 196 GGVFQLEKDDRLSAEINLPDYLDFAESGQVYFGIIAL 232

RESULT 6
A25451
tumor necrosis factor alpha precursor - rabbit
N:Alternate names: cachectin; TNF alpha
C:Species: Oryctolagus cuniculus (domestic rabbit)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: A25454; A25451; JS0727
R:Rito, H.; Yamamoto, S.; Kuroda, S.; Sakamoto, H.; Kajihara, J.; Kiyota, T.; Hayashi, H.
DNA 5, 149-156, 1986
A:Title: Molecular cloning and expression in Escherichia coli of the cDNA coding for ra
A:Reference number: A25454; MUID:86219711; PMID:3519137
A:Accession: A25454
A:Molecule type: mRNA
A:Residues: 1-234 <ITO>
A:CROSS-references: UNIPROT:P04924; UNIPARC:UPI000016C5C2; GB:M12845; NID:g165759; PIDN:
R:Rito, H.; Shirai, T.; Yamamoto, S.; Akira, M.; Kawahara, S.; Todd, C.W.; Wallace, R.B.
DNA 5, 157-165, 1986
A:Title: Molecular cloning of the gene encoding rabbit tumor necrosis factor.
A:Reference number: A25451; MUID:86219712; PMID:3519138
A:Accession: A25451
A:Molecule type: DNA
A:Residues: 1-234 <ITO>
A:CROSS-references: UNIPARC:UPI000016C5C2
A:Note: this sequence differs from that shown in having a Gln inserted between residues
R:Shakhov, A.N.; Kupraev, D.V.; Azizov, M.N.; Jongeneel, C.V.; Nedospasov, S.A.
Gene 95, 215-221, 1990
A:Title: Structural analysis of the rabbit TNF locus, containing the genes encoding TNF
A:Reference number: JH0309; MUID:91065534; PMID:2249779
A:Accession: JS0727
A:Status: nucleic acid sequence not shown; translation not shown
A:Molecule type: DNA
A:Residues: 1-62, 'Q', 63-234 <SHA>
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A;Cross-references: UNIPARC:UPI00001370C7; GB:M60340; GB:M35326; NID:g165754; PIDN:AAA31
C;Genetics: 62/3; 80/1; 96/1
A;Introns: 62/3; 80/1; 96/1
C;Superfamily: tumor necrosis factor
C;Keywords: cytokine; cycotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; memb
F:1-81/Domain: propeptide #status predicted <PRO>
F:82-234/Product: tumor necrosis factor #status predicted <MAT>
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted
F:83/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:147-178/Disulfide bonds: #status predicted

Query Match 79.1%; Score 637.5; DB 1; Length 234;
Best Local Similarity 78.3%; Pred. No. 1.9e-57;
Matches 123; Conservative 16; Mismatches 17; Indels 1; Gaps 1;

QY 1 VRSSRTSPDPAVHVANPQAEQQLWLNRRANALLANGVELRDNLQVPSGGLYLYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 79 LRSASRALSDKPLAHVAVNPQVEGQLWLSQRANALLANGMKLTDNLQVVPADGLYLYS 138

QY 61 QVLFSGQGPCSTHVLTHTSIRIAVSQYTRVNLLSAISPQORETPEGAEALPWYEPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 139 QVLFSGQGCGRS-YVLLTHTVSRFAVSYPKNVLLSAIKSPCHRETPPEAEAPMAYEPIYL 197

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGOVYFGIALL 157
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 198 GGVFQLEKGRSLSTEVNPEYLDLAEAGQVYFGIALL 234

RESULT 7
OWMSN
tumor necrosis factor alpha precursor - mouse
N;Alternate names: cachectin; TNF alpha
C;Species: Mus musculus (house mouse)
C;Date: 31-Mar-1988 #sequence revision 31-Mar-1988 #text change 09-Jul-2004
C;Accession: A22908; S03791; A27303; A25164; A23127; A34251; I59058; A36696
R;Shirai, T.; Shimizu, N.; Shiojiri, S.; Horiguchi, S.; Ito, H.
DNA 7, 193-201, 1988
A;Title: Cloning and expression in Escherichia coli of the gene for mouse tumor necrosis
A;Reference number: A22908; MUID:88224564; PMID:2836146
A;Accession: A22908
A;Molecule type: DNA
A;Residues: 1-235 <SHI>
A;Cross-references: UNIPROT:P06804; UNIPARC:UPI0000022334; GB:M20155
R;Shakhov, A.N.; Nedospasov, S.A.
Bioorg. Khim. 13, 701-705, 1987
A;Title: Molecular cloning of the genes coding for tumor necrosis factors: complete nucl
A;Reference number: S03791; MUID:87298639; PMID:3040015
A;Accession: S03791
A;Molecule type: DNA
A;Residues: 1-235 <SHA>
A;Cross-references: UNIPARC:UPI0000022334; GB:M38296; NID:g202086; PIDN:AAA40459.1; PID:
A;Note: article in Russian with English abstract
R;Semon, D.; Kawashima, E.; Jongeneel, C.V.; Shakhov, A.N.; Nedospasov, S.A.
Nucleic Acids Res. 15, 9083-9084, 1987
A;Title: Nucleotide sequence of the murine TNF locus, including the TNF-alpha-(tumor nec
A;Reference number: A93679; MUID:88067722; PMID:3684584
A;Accession: A27303
A;Molecule type: DNA
A;Residues: 1-235 <SEM>
A;Cross-references: UNIPARC:UPI0000022334; GB:Y00467; NID:g54830; PIDN:CAA68530.1; PID:g
R;Pennica, D.; Hayflick, J.S.; Brinman, T.S.; Palladino, M.A.; Goeddel, D.V.
Proc. Natl. Acad. Sci. U.S.A. 82, 6060-6064, 1985
A;Title: Cloning and expression in Escherichia coli of the cDNA for murine tumor necrosi
A;Reference number: A25164; MUID:85298296; PMID:3898078
A;Accession: A25164
A;Molecule type: mRNA
A;Residues: 1-235 <PEN>
A;Cross-references: UNIPARC:UPI0000022334; GB:M11731; NID:g202084; PIDN:AAA40458.1; PID:
R;Fransen, L.; Muller, R.; Marmonou, A.; Tavernier, J.; van der Heyden, J.; Kawashima,
Nucleic Acids Res. 13, 4417-4429, 1985
A;Title: Molecular cloning of mouse tumour necrosis factor cDNA and its eukaryotic expre
A;Reference number: A23127; MUID:85242112; PMID:2989794
A;Accession: A23127

A;Molecule type: mRNA
A;Residues: 1-235 <FRA>
A;Cross-references: UNIPARC:UPI0000022334; GB:X02611; NID:g54844; PIDN:CAA26457.1; PID:g
J;Csesh, K.; Beutler, B.
J. Biol. Chem. 264, 16256-16260, 1989
A;Title: Alternative cleavage of the cachectin/tumor necrosis factor propeptide results
A;Reference number: A34251; MUID:89380231; PMID:2777790
A;Accession: A34251
A;Molecule type: protein
A;Residues: 70-87 <CSB>
A;Cross-references: UNIPARC:UPI00001735CF
R;Caput, D.; Beutler, B.; Hartog, K.; Thayer, R.; Brown-Shimer, S.L.; Cerami, A.
Proc. Natl. Acad. Sci. U.S.A. 83, 1670-1674, 1986
A;Title: Identification of a common nucleotide sequence in the 3'-untranslated region of
A;Reference number: I59058; MUID:86149365; PMID:2419912
A;Accession: I59058
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 1-230 'R', 232-235 <RES>
A;Cross-references: UNIPARC:UPI000016D086; GB:M13049; NID:g202082; PIDN:AAA40457.1; PID:
R;Sherry, B.; Jue, D.M.; Zentella, A.; Cerami, A.
Biochem. Biophys. Res. Commun. 173, 1072-1078, 1990
A;Title: Characterization of high molecular weight glycosylated forms of murine tumor ne
A;Reference number: A36696; MUID:91097531; PMID:2268312
A;Accession: A36696
A;Molecule type: protein
A;Residues: 80-85, 'X', 87-99 <SHB>
A;Cross-references: UNIPARC:UPI00001735D0
C;Genetics:
A;Introns: 62/3; 81/1; 97/1
A;Note: the first intron occurs in the 5'-untranslated region
C;Superfamily: tumor necrosis factor
C;Keywords: cytokine; cycotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; mem
F:80-235/Product: tumor necrosis factor #status experimental <MAT>
F:20/Binding site: myristate (Lys) (covalent) #status predicted
F:84/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:86/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:148-179/Disulfide bonds: #status predicted

Query Match 78.5%; Score 632.5; DB 1; Length 235;
Best Local Similarity 75.2%; Pred. No. 6.1e-57;
Matches 118; Conservative 21; Mismatches 17; Indels 1; Gaps 1;

QY 1 VRSSRTSPDPAVHVANPQAEQQLWLNRRANALLANGVELRDNLQVPSGGLYLYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 80 LRSSQNSDRPVAHVANPQVHQEQLWLSQRANALLANGMDLKNQLVVPADGLYLYS 139

QY 61 QVLFSGQGPCSTHVLTHTSIRIAVSQYTRVNLLSAISPQORETPEGAEALPWYEPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 140 QVLFQGCQCPD-YVLLTHTVSRFAISYQEKVNLLSAVKSPCKDTPEGALKPWYEPIYL 198

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGOVYFGIALL 157
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 199 GGVFQLEKGRDLSAEVNLPKYLDFAESGOVYFGIALL 235

RESULT 8
S52715
tumor necrosis factor alpha precursor - bovine (fragment)
C;Species: Bos primigenius taurus (cattle)
C;Date: 19-May-1995 #sequence_revision 21-Jul-1995 #text_change 04-Feb-2000
C;Accession: S52715
R;Mertens, B.; Gaidulis, L.
Submitted to the EMBL Data Library, March 1995
A;Description: Cloning and sequence analysis of cDNAs encoding bovine CD40 ligand and b
A;Reference number: S52715
A;Accession: S52715
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-185 <MER>
A;Cross-references: UNIPARC:UPI000016C282; EMBL:Z48808; NID:g7555701; PIDN:CAA88743.1; PI
C;Superfamily: tumor necrosis factor
C;Keywords: glycoprotein

A;Reference number: JH0529; MUID:92112044; PMID:1765267
A;Accession: JH0529

F;84/Binding site: carbohydrate (Ser) (covalent) #status predicted

Query Match

Best Local Similarity 75.2%; Pred. No. 2.5e-56;
Matches 118; Conservative 21; Mismatches 17; Indels 1; Gaps 1;

[illegible]

RESULT 12
S06192
tumor necrosis factor alpha precursor - goat (fragment)
S06192
N;Alternate names: cachectin; TNF alpha
C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 09-Jul-2004
C;Accession: S06192; S41867
R;Goldstein, I.M.; Henner, D.; Talhouk, A.
submitted to the EMBL Data Library, March 1989
A;Reference number: S06192
A;Accession: S06192
A;Molecule type: mRNA
A;Residues: 1-193 <GOL>
A;Cross-references: UNIPROT:P13296; UNIPARC:UPI000016C3FD; EMBL:X14828; NID:9992; PIDN:Q
R;Rimstad, E.

Query Match	77.2%;	Score 622.5;	DB 2;	Length 193;
Best Local Similarity	78.3%;	Pred. No. 5e-56;		
Matches 123: Conservative	14;	Mismatches 19;	Indels 1;	Gaps 1;

Qy	1	VRSSRTPSDAPVAHVIVANPAQAEQLOWLNPRANALLANGVELPDNQLVPDSEGLYLIYS	60
Db	38	LRSSQSSANKPVAHVIVANISAPQLRWGDSYANALKANGVELKDNQLVPDSEGLYLIYS	97
Qy	61	QVLFSGGCGSPSTHLLTHTTSIRIAVSQTRVNLLSAISAPCQRETPEGAEALPWYEPYIL	120
Db	98	QVLFRHGCPSTPLFTHTTSIRIAVSQTKVNLLSAISKPSCHRETPB-AEAKPWYEPYIQ	156
Qy	121	GGVFOLETGRLSAEINRPDYLDPAESGVVYFGIIAL	157
Db	157	GGVFOLEKGRLSAEINRQPYLDPAESGVVYFGIIAL	193

RESULT 13
JU0029
tumor necrosis factor alpha precursor - rat
N;Alternate names: cachectin; TNF alpha
C;Species: Rattus norvegicus (Norway rat)
C;Date: 07-Jun-1990 #sequence revision 07-Jun-1990 #text_change 09-Jul-2004
C;Accession: JU0029; JN0868; S21674
R;Shiral, T.; Shimizu, N.; Horiguchi, S.; Ito, H.
Agric. Biol. Chem. 53, 1733-1736, 1989
A;Title: Cloning and expression in Escherichia coli of the gene for rat tumor necrosis factor
A;Reference number: JU0029
A;Accession: JU0029
A;Molecule type: DNA

A:Residues: 1-235 <SH1>
A:Cross-references: UNIPROT:P16599; UNIPARC:UPI000004368F
R:Kwon, J.; Chung, I.Y.; Benveniste, E.N.
Gene 132, 227-236, 1993
A:Title: Cloning and sequence analysis of the rat tumor necrosis factor-encoding genes.
A:Reference number: JN0868; MUID:94040766; PMID:8224868
A:Accession: JN0868
A:Molecule type: DNA
A:Residues: 1-235 <KWO>
A:Cross-references: UNIPARC:UPI000004368F; GB:L00981; NID:G205253; PIDN:AAA16275.1; PID
R:Estler, H.C.; Grewe, M.; Gausling, R.; Pavlovic, M.; Decker, K.
Biol. Chem. Hoppe-Seyler 373, 271-281, 1992
A:Title: Rat tumor necrosis factor-alpha. Transcription in rat Kupffer cells and in vitro
A:Reference number: S21674; MUID:92329007; PMID:1627266
A:Accession: S21674
A:Molecule type: mRNA
A:Residues: 1-38, 'P', 40-162, 'T', 164-201, 'S', 203-235 <EST>
A:Cross-references: UNIPARC:UPI000017086D; GB:X66539; GB:S40199; NID:G395369; PIDN:CAA47
C:Comment: Tumor necrosis factor is secreted by macrophages in response to endotoxin and
C:Genetics:
A:Gene: TNF-alpha
A:Introns: 62/3; 81/1; 97/1
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; mem
F:80-235/Product: tumor necrosis factor #status predicted <MAR>
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted
F:84/Binding site: carboxylate (Ser) (covalent) #status predicted
F:86/Binding site: carboxylate (Asn) (covalent) #status predicted
F:148-179/Disulfide bonds: #status predicted

	Query Match	76.6%	Score 617.5;	DB 2;	Length 235;
	Best Local Similarity	74.5%	Pred. No. 2.1e-55;		
	Matches 117;	Conservative 20;	Mismatches 19;	Indels 1;	Gaps 1;
Qy	1	VRSSRTSDAPVAHVAVNPQAEGLQWLNRRANALLANGVELRDQLVVPSEGLYLIIYS	60		
Db	80	LRSSSSNDKPPVAHVAVNHQAEGLQWLNRRANALLANGMDLKDQLVVPADGLYLIIYS	139		
Qy	61	QVLPSGGQCPSTHLLTHTTISRIVSYQTRVNLLSAISPQRETPEGALPMYEPYIL	120		
Db	140	QVLPKGGQCPD-YVLLTHTVSRFAISYQKVSLLSAIKSPCKDTPEGALKPMYEPYIL	198		
Qy	121	GGVFLQLETGRLSLEINRPDYLDFAESGGVYFGIIAL	157		
Db	199	GGVFLQLEKGLLSAEVNLPKYLDITESGGVYFGVIAL	235		

RESULT 14
JH0309
tumor necrosis factor beta precursor - rabbit
N:Alternate names: lymphotoxin; TNF beta
C:Species: Oryctolagus cuniculus (domestic rabbit)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: JH0309; PNO098
R:Shakhov, A.N.; Kuprash, D.V.; Azizov, M.M.; Jongeneel, C.V.; Nedospasov, S.A.
Gene 95, 215-221, 1990
A:Title: Structural analysis of the rabbit TNF locus, containing the genes encoding TNF-
A:Reference number: JH0309; MUID:91065534; PMID:2249779
A:Accession: JH0309
A:Molecule type: DNA
A:Residues: 1-197 <SH2>
A:Cross-references: UNIPROT:P10154; UNIPARC:UPI00001370CE; GB:M60340; GB:M35326; NID:916
R:Shakhov, A.N.; Kuprash, D.V.; Turetskaya, R.L.; Azizov, M.M.; Andreyeva, A.V.; Nedospa
Mol. Biol. (Mosk.) 23, 1743-1750, 1989
A:Title: Cloning and structural analysis of the genes, coding for rabbit tumor necrosis
A:Reference number: PNO098; MUID:90220566; PMID:2633043
A:Accession: PNO098
A:Molecule type: mRNA
A:Residues: 1-197 <SH1>
A:Cross-references: UNIPARC:UPI00001370CE; GB:X55745; NID:G297167; PIDN:CAA39275.1; PID:
C:Genetics:
A:Introns: 25/3; 61/1
C:Superfamily: tumor necrosis factor

Search completed: May 5, 2006, 11:27:51
Job time : 19 secs

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GenCore version 5.1.7
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OM protein - protein search, using sw.model

Run on: May 5, 2006, 11:21:53 ; Search time 53.5 Seconds
(without alignments)
2070.429 Million cell updates/sec

Title: US-10-668-178-15
Perfect score: 806
Sequence: 1 VRSSRTSPDAPVAHVANP.....RPDYLDFAESGVYFGIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Uniprot 05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	777	96.4	233	1	TNFA_HUMAN
2	777	96.4	233	2	Q5STB3_HUMAN
3	770	95.5	233	1	TNFA_PAPSP
4	768	95.3	232	1	TNFA_PANTR
5	759	94.2	233	1	TNFA_MACMU
6	756	93.8	233	1	TNFA_PAPFU
7	755	93.7	233	1	TNFA_PAPHU
8	752	93.3	233	1	TNFA_PAPAN
9	742	92.1	149	2	Q97543_AOTNA
10	736	91.3	233	1	TNFA_CANFA
11	729	90.4	233	1	TNFA_FELCA
12	704	87.3	233	1	TNFA_SATSC
13	695	86.2	234	1	TNFA_HORSE
14	693	86.0	149	2	Q97538_AOTVO
15	693	86.0	149	2	Q97TG8_AOTNI
16	689	85.5	217	2	Q9BEG0_CYCDI
17	685	85.0	233	1	Q9BEG1_BRATR
18	677	84.0	233	1	TNFA_DELLE
19	675.5	83.8	232	1	TNFA_PIG
20	659	81.8	233	1	TNFA_TURTR
21	650	80.6	217	2	Q9BEF4_CABUN
22	640	79.4	138	2	Q9TTG7_AOTLE
23	639	79.3	234	1	TNFA_CAPHI
24	637.5	79.1	235	1	TNFA_RABIT
25	636	78.9	234	2	Q53ZM5_CAPHI
26	635.5	78.8	234	1	TNFA_CAVPO
27	632.5	78.5	235	1	TNFA_MOUSE
28	631	78.3	234	2	Q539C2_TUPTA
29	630	78.2	216	2	Q9BEC4_TALEU
30	630	78.2	229	1	TNFA_CEREL
31	629	78.0	233	1	TNFA_BOVIN

32	629	78.0	233	1	TNFA_BUBBU	P59693 bubalus bub
33	629	78.0	234	1	TNFA_BOSIN	P59684 bos indicus
34	629	77.8	234	1	TNFA_SHEEP	P23383 ovis aries
35	626.5	77.7	235	1	TNFA_PERLE	P36939 peromyscus
36	620.5	77.0	232	2	Q80XA4_PERMA	Q80xa4 peromyscus
37	620.5	77.0	235	2	Q5W9H9_MERUN	Q5w9h9 meriones un
38	617.5	76.6	235	1	TNFA_RAT	P16599 rattus norv
39	617.5	76.6	235	2	Q6BE11_RAT	Q6ee11 rattus norv
40	615	76.3	233	1	TNFA_CAMBA	Q75523 camelus bac
41	615	76.3	233	1	TNFA_LAMGL	P59694 lama glama
42	609.5	75.6	156	2	Q91ZL4_SIGHI	Q91z14 sigmodon hi
43	605.5	75.1	216	2	Q9BEC9_OCHPR	Q9bec9 ochotona pr
44	602.5	74.8	233	1	TNFA_MARMO	O35734 marmota mon
45	602.5	74.8	233	2	Q6X658_MARMO	Q6x658 marmota mon

ALIGNMENTS

RESULT 1

ID	TNFA_HUMAN	STANDARD;	PRT;	233 AA.
AC	P01375; Q43647; Q9P1Q2; Q9UIV3;			
DT	21-JUL-1986 (Rel. 01, Created)			
DT	21-JUL-1986 (Rel. 01, Last sequence update)			
DE	Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor			
DE	ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor			
DE	necrosis factor, membrane form; Tumor necrosis factor, soluble form].			
GN	Names=TNF; Synonyms=TNFA, TNFSF2;			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;			
OC	Homo.			
OX	NCBI_TaxID=9606;			
RN	[1]			
RP	NUCLEOTIDE SEQUENCE.			
RX	MEDLINE=87217060; PubMed=3555974;			
RA	Nedospasov S.A., Shakhov A.N., Turetskaya R.L., Mett V.A.,			
RA	Azizov M.M., Georgiev G.P., Korobko V.G., Dobrynin V.N.,			
RA	Filippov S.A., Bystrov N.S., Boldyreva E.F., Chuvpilo S.A.,			
RA	Chumakov A.M., Shingarova L.N., Ovchinnikov Y.A.;			
RT	"Tandem arrangement of genes coding for tumor necrosis factor (TNF-			
RT	alpha) and lymphotoxin (TNF-beta) in the human genome.";			
RN	Cold Spring Harb. Symp. Quant. Biol. 51:611-624(1986).			
RP	NUCLEOTIDE SEQUENCE.			
RX	MEDLINE=85086244; PubMed=6392892;			
RA	Pennica D., Nedwin G.E., Hayflick J.S., Seeburg P.H., Derynck R.,			
RA	Palladino M.A., Kohr W.J., Aggarwal B.B., Goeddel D.V.;			
RT	"Human tumour necrosis factor: precursor structure, expression and			
RT	homology to lymphotoxin.";			
RL	Nature 312:724-729(1984).			
RP	NUCLEOTIDE SEQUENCE.			
RX	MEDLINE=85137898; PubMed=3883195;			
RA	Shirai T., Yamaguchi H., Ito H., Todd C.W., Wallace R.B.;			
RT	"Cloning and expression in Escherichia coli of the gene for human			
RT	tumour necrosis factor.";			
RL	Nature 313:803-806(1985).			
RP	NUCLEOTIDE SEQUENCE.			
RX	MEDLINE=86016093; PubMed=2995927;			
RA	Nedwin G.E., Naylor S.L., Sakaguchi A.Y., Smith D.H.,			
RA	Jarrett-Nedwin J., Pennica D., Goeddel D.V., Gray P.W.;			
RT	"Human lymphotoin and tumor necrosis factor genes: structure,			
RT	homology and chromosomal localization.";			
RL	Nucleic Acids Res. 13:6361-6373(1985).			
RP	NUCLEOTIDE SEQUENCE.			
RX	MEDLINE=85142190; PubMed=3856324;			
RA	Wang A.M., Creasey A.A., Ladner M.B., Lin L.S., Strickler J.,			
RA	van Arsdel J.N., Yamamoto R., Mark D.F.;			

RT "Molecular cloning of the complementary DNA for human tumor necrosis factor.";

RA Science 228:149-154(1985).

RN [16]

RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=86030296; PubMed=3932069;

RA Marmenout A., Fransen L., Tavernier J., van der Heyden J., Tizard R., Kawashima E., Shaw A., Johnson M.J., Semon D., Mueller R., Ruysschaert M.R., van Vliet A., Fiers W.;

RA "Molecular cloning and expression of human tumor necrosis factor and comparison with mouse tumor necrosis factor.";

RT Eur. J. Biochem. 152:515-522(1985).

RN [7]

RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=93272029; PubMed=8499947;

RA Iris F.J.M., Bougueleret L., Prieur S., Caterina D., Primas G., Perrot V., Jurka J., Rodriguez-Tone P., Claverie J.-M., Dausset J., Cohen D.;

RA "Dense Alu clustering and a potential new member of the NF kappa B family within a 90 kilobase HLA class III segment.";

RT Nat. Genet. 3:137-145(1993).

RN [8]

RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=99218514; PubMed=10202016;

RA Neville M.J., Campbell R.D.;

RA "A new member of the Ig superfamily and a V-ATPase G subunit are among the predicted products of novel genes close to the TNF locus in the human MHC.";

RT J. Immunol. 162:4745-4754(1999).

RN [9]

RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RX PubMed=14656967; DOI=10.1101/gr.1736803;

RA Xie T., Rowen L., Aguado B., Ahern M.E., Madan A., Qin S., Campbell R.D., Hood L.;

RA "Analysis of the gene-dense major histocompatibility complex class III region and its comparison to mouse.";

RT Genome Res. 13:2621-2636(2003).

RN [10]

RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RA Shiina S., Tamiya G., Oka A., Inoko H.;

RA "Homo sapiens 2,229,817bp genomic DNA of 6p21.3 HLA class I region.";

RT Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.

RN [11]

RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RA Shiina T., Ota M., Katsuyama Y., Hashimoto N., Inoko H.;

RA "Genome diversity in HLA: a new strategy for detection of genetic polymorphisms in expressed genes within the HLA class III and class I regions.";

RT Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.

RN [12]

RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].

RA Rieder M.J., Carrington D.P., Chung M.-W., Lee K.L., Poel C.L., Yi Q., Nickerson D.A.;

RA "SeattleSNPs, NHLBI HL6682 program for genomic applications, UW-FHCR, Seattle, WA (URL: <http://pga.gs.washington.edu>).";

RT Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.

RN [13]

RP NUCLEOTIDE SEQUENCE [GENOMIC DNA], AND VARIANT LEU-84.

RA Rieder M.J., Livingston R.J., Daniels M.R., Montoya M.A., Chung M.-W., Miyamoto K.E., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Witrak L.A., Nickerson D.A.;

RA "NIH-SNPs, environmental genome project, NIH ES15478, Department of Genome Sciences, Seattle, WA (URL: <http://egp.gs.washington.edu>).";

RT Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.

RN [14]

RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

RC TISSUE=Blood.

RX MEDLINE=23288257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Schuler G.D., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Bhat N.K., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toehiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McSwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Kettelman M., Madan A.C., Rodrigues S., Sanchez A., Whiting M., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalish D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

RA "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";

RT Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

RN [15]

RP NUCLEOTIDE SEQUENCE OF 77-233.

RA Jang J.S., Kim B.E.;

RA Submitted (JAN-1998) to the EMBL/GenBank/DBJ databases.

RN [16]

RP NUCLEOTIDE SEQUENCE OF 84-214.

RC TISSUE=Prostatic carcinoma;

RA Shao C., Yan W., Zhu F., Yue W., Chai Y., Zhao Z., Wang C.;

RA Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.

RN [17]

RP PHOSPHORYLATION (MEMBRANE FORM).

RX MEDLINE=96170872; PubMed=8597870;

RA Poczak E., Duda E., Wallach D.;

RA "Phosphorylation of the 26 kDa TNF precursor in monocytic cells and in transfected HeLa cells.";

RT J. Inflamm. 45:152-160(1995).

RN [18]

RP PHOSPHORYLATION BY CK1, AND DEPHOSPHORYLATION.

RX MEDLINE=9221647; PubMed=10205166; DOI=10.1093/emboj/18.8.2119;

RA Watts A.D., Hunt N.H., Wanigasekara Y., Bloomfield G., Wallach D., Roufogalis B.D., Chaudhri G.;

RA "A casein kinase I motif present in the cytoplasmic domain of members of the tumour necrosis factor ligand family is implicated in 'reverse signalling'.";

RT EMBO J. 18:2119-2126(1999).

RN [19]

RP MUTAGENESIS.

RX MEDLINE=91184128; PubMed=2009860;

RA Octade X.V., Tavernier J., Prange T., Fiers W.;

RA "Localization of the active site of human tumour necrosis factor (hTNF) by mutational analysis.";

RT EMBO J. 10:827-836(1991).

RN [20]

RP MYRISTOYLATION.

RX MEDLINE=93018820; PubMed=1402651; DOI=10.1084/jem.176.4.1053;

RA Stevenson P.T., Bursten S.L., Locksley R.M., Lovett D.H.;

RA "Myristyl acylation of the tumor necrosis factor alpha precursor on specific lysine residues.";

RT J. Exp. Med. 176:1053-1062(1992).

RN [21]

RP CLEAVAGE BY ADAM17.

RX MEDLINE=97186575; PubMed=9034191;

RA Moss M.L., Jin S.-L.C., Milla M.E., Burkhardt W., Carter H.L., Chen W.-J., Clay W.C., Didsbury J.R., Hassler D., Hoffman C.R., Kost T.A., Lambert M.H., Leesnitzer M.A., McCauley P., McGeehan G., Mitchell J., Moyer M., Pabel G., Rocque W., Overton L.K., Schoenen F., Seaton T., Su J.-L., Warner J., Willard D., Becherer J.D.;

RA "Cloning of a disintegrin metalloproteinase that processes precursor tumour-necrosis factor-alpha.";

RT Nature 385:733-736(1997).

RN [22]

RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).

RX MEDLINE=89159409; PubMed=2922050; DOI=10.1038/338225a0;

RA Jones E.Y., Stuart D.I., Walker N.P.;

RA "Structure of tumour necrosis factor.";

RT Nature 338:225-228(1989).

RN [23]

RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).

SQ SEQUENCE 233 AA; 25557 MW; 455360B48DC74173 CRC64;
Query Match 95.5%; Score 770; DB 1; Length 233;
Best Local Similarity 95.5%; Pred. No. 2.7e-70;
Matches 150; Conservative 1; Mismatches 6; Indels 0; Gaps 0;
QY 1 VRSSRTSPDAPVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
DB 77 VRSSRTSPDAPVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 136
QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTVNLLSAISPCQRETPGAEALPWYEPYIL 120
DB 137 QVLFSGQGCPSHTVLLTHTISRIAVSYQTVNLLSAISPCQRETPGAEALPWYEPYIL 196
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 197 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 233

RESULT 4

TNFA_PANTR STANDARD; PRT; 232 AA.
AC Q8HZD9;
DT 10-OCT-2003 (Rel. 42, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSP2;
OS Pan troglodytes (Chimpanzee).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Pan.
OX NCBI_TaxID=9598;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22381002; PubMed=12491009;
DOI=10.1034/j.1600-065X.2002.19008.x;
RA Kuleki J.K., Shiina T., Anzai T., Kohara S., Inoko H.;
RT "Comparative genomic analysis of the MHC: the evolution of class I
RT duplication blocks, diversity and complexity from shark to man.";
RL Immunol. Rev. 190:95-122(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX MEDLINE=22709134; PubMed=12799463; DOI=10.1073/pnas.1230533100;
Anzai T., Shiina T., Kimura N., Yanagiya K., Kohara S., Shigenari A.,
RA Yamagata T., Kuleki J.K., Naruse T.K., Fujimori Y., Fukuzumi Y.,
RA Yamazaki M., Tashiro H., Imamoto C., Umehara Y., Imanishi T.,
RA Meyer A., Ikeo K., Gojobori T., Bahram S., Inoko H.;
RT "Comparative sequencing of human and chimpanzee MHC class I regions
RT unveils insertions/deletions as the major path to genomic
RT divergence.";
RL Proc. Natl. Acad. Sci. U.S.A. 100:7708-7713(2003).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 33-186.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RT specific characteristics.";
RL Submitted (MAR-2002) to the EMBL/GenBank/DBSJ databases.
CC -1- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation (By similarity).
CC -1- SUBUNIT: Homotrimer (By similarity).
CC -1- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -1- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -1- PTM: The membrane form, but not the soluble form, is

phosphorylated on serine residues. Dephosphorylation of the
membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
similarity).
CC -1- SIMILARITY: Belongs to the tumor necrosis factor family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC EMBL; AB054536; BAB83882.1; -; Genomic DNA.
CC EMBL; BA000041; BAC78157.1; -; Genomic DNA.
CC EMBL; AY091964; AAM76582.1; -; Genomic DNA.
CC HSSP; P01375; 4TSV.
CC SMR; Q8HZD9; 81-232.
DR InterPro; IPR006053; TNF_abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR PANTHER; FTHR11471:SF4; TNF_alpha; 1.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD02012; TNF_subf; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 232 Tumor necrosis factor, membrane form (By
FT similarity).
FT CHAIN 77 232 Tumor necrosis factor, soluble form (By
FT similarity).
FT TOPO_DOM 1 34 Cytoplasmic (Potential).
FT TRANSMEM 35 57 Signal-anchor for type II membrane
FT TOPO_DOM 58 232 protein (By similarity).
FT SITE 76 77 Extracellular (Potential).
FT MOD_RES 2 2 Cleavage (by ADAM17) (By similarity).
FT DISULFID 144 176 Phosphoserine (by CK1) (By similarity).
FT CONFLICT 77 77 By similarity.
SQ SEQUENCE 232 AA; 25446 MW; E4D71B19C6AE0D03 CRC64;
Query Match 95.3%; Score 768; DB 1; Length 232;
Best Local Similarity 96.1%; Pred. No. 4.4e-70;
Matches 149; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 3 SSSRTSPDAPVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYSQV 62
DB 78 SSSRTSPDAPVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYSQV 137
QY 63 LFSGQGCPSHTVLLTHTISRIAVSYQTVNLLSAISPCQRETPGAEALPWYEPYILGG 122
DB 138 LFSGQGCPSHTVLLTHTISRIAVSYQTVNLLSAISPCQRETPGAEALPWYEPYILGG 197
QY 123 VFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 198 VFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 232
RESULT 5
TNFA_MACVU STANDARD; PRT; 233 AA.
ID TNFA_MACVU
AC P48094; Q5TM11; Q8HZD6;
DT 01-FEB-1996 (Rel. 33, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
DE Name=TNF; Synonyms=TNFA, TNFSP2;
GN Macaca mulatta (Rhesus macaque).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;

OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RX MEDLINE=96003435; PubMed=7561102;
RA Villinger F.J., Brar S.S., Wayne A.E., Chikkala N., Ansari A.A.;
RT "Comparative sequence analysis of cytokine genes from human and
RT nonhuman primates";
RL J. Immunol. 155:3946-3954 (1995).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX PubMed=15269276; DOI=10.1093/molbev/msh216;
RA Kulski J.K., Anzai T., Shihina T., Inoko H.;
RT "Rhesus macaque class I duplicon structures, organization, and
RT evolution within the alpha block of the major histocompatibility
RT complex";
RL Mol. Biol. Evol. 21:2079-2091 (2004).
RN [3]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA] OF 33-187.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RT specific characteristics";
RL Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia, under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity). Belongs to the tumor necrosis factor family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; U19850; AAA86712.1; -; mRNA.
CC EMBL; AB128049; BAD69724.1; -; Genomic DNA.
CC EMBL; AY091967; AAM76585.1; -; Genomic DNA.
CC HSSP; P01375; 4TSV.
CC SMR; P48094; 82-233.
CC InterPro; IPR006053; TNF_alpha.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR006336; TNF_subf.
CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNCRSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD002012; TNF_subf; 1.
CC SMART; SM00207; TNF; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS0049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
KW CHAIN 1 233 Tumor necrosis factor, membrane form.
FT CHAIN 77 233 Tumor necrosis factor, soluble form.
FT CHAIN 1 35 Cytoplasmic (Potential).
FT TOPO_DOM 36 56 Signal-anchor for type II membrane
FT TRANSMEM 36 56 protein (Potential).
FT TOPO_DOM 57 233 Extracellular (Potential).
FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).

FT DISULFID 145 177 By similarity.
SQ SEQUENCE 233 AA; 25630 MW; 9F6F85050595FDS9 CRC64;
Query Match 94.2%; Score 759; DB 1; Length 233;
Best Local Similarity 94.3%; Pred No. 3.7e-69;
Matches 148; Conservative 1; Mismatches 8; Indels 0; Gaps 0;
QY 1 VRSSRTSPDAPVAHVANPQAGQLQWLNRRANALLANGVELRDQLVVPSEGLYLIYS 60
DB 77 VRSSRTSPDKFVAHVANPQAGQLQWLNRRANALLANGVELTDQLVVPSEGLYLIYS 136
QY 61 QVLPSGQCPSTHVLTLTTHISRIAVSYQTRVNLISAIASPCORETPEGAEALPWYPIYL 120
DB 137 QVLPSGQCPSTHVLTLTTHISRIAVSYQTRVNLISAIASPCORETPEGAEALPWYPIYL 196
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIALL 157
DB 197 GGVFOLEKGRDLSAEINRPDYLDFAESGVYFGIALL 233
RESULT 6
TNFA MACFA
ID TNFA MACFA STANDARD; PRT; 233 AA.
AC P79337;
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9541;
RN NUCLEOTIDE SEQUENCE [MRNA].
RC TISSUE=Lymphocyte;
RA Tatum M.;
RT "Molecular cloning and expression of cynomolgus monkey TNF-alpha";
RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia, under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity). Belongs to the tumor necrosis factor family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AB000513; BAA19131.1; -; mRNA.
CC HSSP; P01375; 4TSV.
CC SMR; P79337; 82-233.
CC InterPro; IPR006053; TNF_alpha.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR006336; TNF_subf.
CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNCRSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD002012; TNF_subf; 1.
CC SMART; SM00207; TNF; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS0049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
KW CHAIN 1 233 Tumor necrosis factor, membrane form.
FT CHAIN 77 233 Tumor necrosis factor, soluble form.
FT CHAIN 1 35 Cytoplasmic (Potential).
FT TOPO_DOM 36 56 Signal-anchor for type II membrane
FT TRANSMEM 36 56 protein (Potential).
FT TOPO_DOM 57 233 Extracellular (Potential).
FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).

DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PRO1234; TNECROSISFCT.
 DR ProDom; PD002012; TNF_subf; 1.
 DR SMART; SM00207; TNF; 1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS0049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT TOPO_DOM 1 35
 FT TRANSMEM 36 56
 FT TOPO_DOM 57 233
 FT SITE 76 77
 FT MOD_RES 2 2
 FT DISULFID 145 177
 SQ SEQUENCE 233 AA; 25558 MW; 6ABF2C3AB132C217 CRC64;
 Query Match 93.8%; Score 756; DB 1; Length 233;
 Best Local Similarity 93.6%; Pred. No. 7.4e-69;
 Matches 147; Conservative 2; Mismatches 8; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVLPSEGLYLIYS 60
 Db 77 VRSSRTPSDKVAHVANPQAEQQLWLNRRANALLANGVELTDNLQVLPSEGLYLIYS 136
 QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTRVNLSSAISPQRETPEGAALPWYEPIYL 120
 Db 137 QVLFKGQGCPSNVHLLTHTISRIVSYQTKVNLSSAISPQRETPEGAALPWYEPIYL 196
 QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGVYFGIIAL 157
 Db 197 GGVFQLEKGRDLSAEINLPDYLDFAESGVYFGIIAL 233
 RESULT 7
 TNFA_PAPHU STANDARD; PRT; 233 AA.
 ID TNFA_PAPHU
 AC 077510;
 DT 15-DEC-1998 (Rel. 37, Created)
 DT 15-DEC-1998 (Rel. 37, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Papio hamadryas ursinus (Chacma baboon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopithecoidea; Cercopithecinae; Papio.
 OX NCBI_TaxID=36229;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RX MEDLINE=98147379; PubMed=9488055; DOI=10.1016/S0161-5890(97)00124-7;
 RA Haudek S.B., Redl H., Schleg G., Giroir B.P.;
 RT "Complementary DNA (cDNA) sequence of baboon tumor necrosis factor
 RT alpha.";
 RL Mol. Immunol. 34:1041-1042(1997).
 CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
 CC TNFRSF1B/TNFR2. It is mainly secreted by macrophages and can
 CC induce cell death of certain tumor cell lines. It is potent
 CC pyrogen causing fever by direct action or by stimulation of
 CC interleukin 1 secretion and is implicated in the induction of
 CC cachexia. Under certain conditions it can stimulate cell
 CC proliferation and induce cell differentiation.
 CC -!- SUBUNIT: Homotrimer (By similarity).
 CC -!- SUBCELLULAR LOCATION: type II membrane protein. Also exists as an
 CC extracellular soluble form (By similarity).
 CC -!- PTM: The soluble form derives from the membrane form by
 CC proteolytic processing (By similarity).
 CC -!- PTM: The membrane form, but not the soluble form, is

CC phosphorylated on serine residues. Dephosphorylation of the
 CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
 CC similarity).
 CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
 CC -----
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 CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
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 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 CC EMBL; AF019963; AAC31675.1; -; mRNA.
 DR HSSP; P01375; 4TSV.
 DR SMR; O77510; 82-233.
 DR InterPro; IPR006053; TNF_abc.
 DR InterPro; IPR002959; TNF_alpha.
 DR InterPro; IPR006052; TNF family.
 DR InterPro; IPR003636; TNF_subf.
 DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PRO1234; TNECROSISFCT.
 DR PRINTS; PRO1235; TNFALPHA.
 DR ProDom; PD002012; TNF_subf; 1.
 DR SMART; SM00207; TNF; 1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS0049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT TOPO_DOM 1 35
 FT TRANSMEM 36 56
 FT TOPO_DOM 57 233
 FT SITE 76 77
 FT MOD_RES 2 2
 FT DISULFID 145 177
 SQ SEQUENCE 233 AA; 25658 MW; B940325058DA03 CRC64;
 Query Match 93.7%; Score 755; DB 1; Length 233;
 Best Local Similarity 93.6%; Pred. No. 9.4e-69;
 Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVLPSEGLYLIYS 60
 Db 77 VRSSRTPSDKVAHVANPQAEQQLWLNRRANALLANGVELTDNLQVLPSEGLYLIYS 136
 QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTRVNLSSAISPQRETPEGAALPWYEPIYL 120
 Db 137 QVLFKGQGCPSNVHLLTHTISRIVSYQTKVNLSSAISPQRETPEGAALPWYEPIYL 196
 QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGVYFGIIAL 157
 Db 197 GGVFQLEKGRDLSAEINLPDYLDFAESGVYFGIIAL 233
 RESULT 8
 TNFA_PAPAN STANDARD; PRT; 233 AA.
 ID TNFA_PAPAN
 AC P59695;
 DT 10-OCT-2003 (Rel. 42, Created)
 DT 10-OCT-2003 (Rel. 42, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Papio anubis (Olive baboon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopithecoidea; Cercopithecinae; Papio.
 OX NCBI_TaxID=9555;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=21383618; PubMed=11491535; DOI=10.1007/s002510100322;
RA Villinger F.J., Bostik P., Wayne A.E., King C.L., Genain C.P.,
RA Weiss W.R., Ansari A.A.;
RT "Cloning, sequencing, and homology analysis of nonhuman primate
RL Fas/Fas-ligand and co-stimulatory molecules.";
RL Immunogenetics 53:315-328(2001).
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation (By similarity).
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
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CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AY234222; AAC05335.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; P59695; 82-233.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF alpha.
DR InterPro; IPR006052; TNF family.
DR InterPro; IPR003636; TNF subf.
DR PANTHER; PTHR11471.SF4; TNF_alpha; 1.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR PRODOM; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF 1; 1.
DR PROSITE; PS00049; TNF 2; 1.
DR Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233 Tumor necrosis factor, membrane form (By
FT similarity).
FT CHAIN 77 233 Tumor necrosis factor, soluble form (By
FT similarity).
FT TOPO_DOM 1 34 Cytoplasmic (Potential).
FT TRANSMEM 35 57 Signal-anchor for type II membrane
FT protein (By similarity).
FT TOPO_DOM 58 233 Extracellular (Potential).
FT SITE_76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT DISULFID 145 177 By similarity.
FT SEQUENCE 233 AA; 25736 MW; 0C477F9EB6CC9909 CRC64;
Query Match 93.3%; Score 752; DB 1; Length 233;
Best Local Similarity 93.6%; Pred. No. 1.9e-68;
Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;
QY 1 VRSSRTSPDPAVHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 77 VRSSRTSPDKPAHVHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS.136
QY 61 QVLFSGGCGPSTVLLTHTTSRIAVSYQTVNLLSAISAPCQRETPGEGALPWYEPYIL 120
DB 137 QVLFKGGCGPSNVLLTHTTSRIAVSYQTVNLLSAISKPCQRETPGEGAKPWYEPYIL 196
QY 121 GGVFQLBTGDRLSAEINRPDYLDPAESGQVYFGIIAL 157

DB 197 GGVFQLEKGRDLSAEINRPDYLDPAESGQVYFGIIAL 233
RESULT 9
QY 097543 AOTNA PRELIMINARY; PRT; 149 AA.
AC 097543;
DT 01-MAY-1999 (TREMBLrel. 10, Created)
DT 01-MAY-1999 (TREMBLrel. 10, Last sequence update)
DT 01-OCT-2003 (TREMBLrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (Fragment).
GN Name-TNF-alpha;
OS Aotus nancyanae (Ma's night monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Aotinae; Aotus.
OX NCBI_TaxID=37293;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
RT in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF014513; AAC01539.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; 097543; 1-149.
DR GO; GO:0016020; C-membrane; IEA.
DR GO; GO:0005164; F-tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P-immune response; IEA.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF alpha.
DR InterPro; IPR006052; TNF family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR PRODOM; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF 1; 1.
DR PROSITE; PS00049; TNF 2; 1.
DR NON_TER 1
FT NON_TER 149 149
FT SEQUENCE 149 AA; 16466 MW; 3C2A6140778EFABA CRC64;
Query Match 92.1%; Score 742; DB 2; Length 149;
Best Local Similarity 96.0%; Pred. No. 1.2e-67;
Matches 143; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 8 PSDAPVHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLPFGQ 67
DB 1 PSDKPAHVHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLPFGQ 60
QY 68 GCPSTHLLTHTTSRIAVSYQTVNLLSAISAPCQRETPGEGALPWYEPYILGGVQLE 127
DB 61 GCPSTHLLTHTTSRIAVSYQTVNLLSAISKPCQRETPGEGAKPWYEPYILGGVQLE 120
QY 128 TGDRLSAEINRPDYLDPAESGQVYFGIIA 156
DB 121 KGDRLSAEINRPDYLDPAESGQVYFGIIA 149
RESULT 10
ID TNFA_CANFA STANDARD; PRT; 233 AA.
AC P51742; Q28339;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].

DR PROSITE; P550049; TNF 2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233 Tumor necrosis factor, membrane form (By similarity).
 FT CHAIN 77 233 Tumor necrosis factor, soluble form (By similarity).
 FT TOPO_DOM 1 32 Cytoplasmic (Potential).
 FT TRANSMEM 33 55 Signal-anchor for type II membrane protein (By similarity).
 FT TOPO_DOM 56 233 Extracellular (Potential).
 FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
 FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
 FT DISULFID 145 177 By similarity.
 SQ SEQUENCE 233 AA; 25578 MW; 197FB066F744FCAD CRC64;
 Query Match 87.3%; Score 704; DB 1; Length 233;
 Best Local Similarity 87.3%; Pred. No. 1.6e-63;
 Matches 137; Conservative 6; Mismatches 14; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVWPSEGLYLIYS 60
 DB 77 VRSSRIIPSDKPAHVANPQAEGLQWLNRRANALLANGVELRDNLVWPSEGLYLIYS 136
 QY 61 QVLFSGQGPCSTHLLTHTISRIASVYOTRVNLLSAIASPCORETPEGAEALPWYEPIYL 120
 DB 137 QVLFKGQGPCSTFTLLTHTISRIASVYQKVNLLSAIKSPCORETPRGKTHPWEPIYL 196
 QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
 DB 197 GGVFQLEKGDRLSABISPPDSLDAESGQVYFGIIAL 233
 RESULT 13
 TNFA_HORSE
 ID TNFA_HORSE STANDARD; PRT; 234 AA.
 AC P29553; Q9TTJ3;
 DT 01-APR-1993 (Rel. 25, Created)
 DT 01-APR-1993 (Rel. 25, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSP;
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=92084125; PubMed=1748301; DOI=10.1016/0378-1119(91)90333-7;
 RA Su X., Morris D.D., McGraw R.A.;
 RT "Cloning and characterization of gene TNF alpha encoding equine tumor necrosis factor alpha."
 RL Gene 107:319-321(1991).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=Thorougbred; TISSUE=Artery;
 RA Ishida N., Sato F., Hasegawa T.;
 RT "Molecular cloning of equine tumor necrosis factor-alpha mRNA."
 RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin 1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation.
 CC -1- SUBUNIT: Homotrimer (By similarity).
 CC -1- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an extracellular soluble form (By similarity).
 CC -1- PTM: The soluble form derives from the membrane form by proteolytic processing (By similarity).
 CC -1- PTM: The membrane form, but not the soluble form, is

phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By similarity).
 CC -1- SIMILARITY: Belongs to the tumor necrosis factor family.
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 CC EMBL; M64087; AAA30959.1; -; Genomic DNA.
 DR EMBL; AB035735; BAA88349.1; -; mRNA.
 DR PIR; J01344; J01344.
 DR HSP; F01375; IAS8.
 DR SMR; P29553; 83-234.
 DR InterPro; IPR006053; TNF_abc.
 DR InterPro; IPR002959; TNF_alpha.
 DR InterPro; IPR006052; TNF_family.
 DR InterPro; IPR003636; TNF_subf.
 DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PR01234; TNECROSISFCT.
 DR PRINTS; PR01235; TNFALPHA.
 DR ProDom; PD02012; TNF_subf; 1.
 DR SMART; SM00207; TNF_1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS50049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 234 Tumor necrosis factor, membrane form.
 FT CHAIN 78 234 Tumor necrosis factor, soluble form.
 FT TOPO_DOM 1 35 Cytoplasmic (Potential).
 FT TRANSMEM 36 56 Signal-anchor for type II membrane protein (Potential).
 FT TOPO_DOM 57 234 Extracellular (Potential).
 FT SITE 77 78 Cleavage (by ADAM17) (By similarity).
 FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
 FT DISULFID 146 178 By similarity.
 FT CONFLICT 177 179 PCH -> LAN (in Ref. 2).
 SQ SEQUENCE 234 AA; 25469 MW; E79ACE91143DF373 CRC64;
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 Best Local Similarity 85.4%; Pred. No. 1.3e-62;
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 QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVWPSEGLYLIYS 60
 DB 78 LRSSRTPSDKPAHVANPQAEGLQWLSGRANALLANGVKTLDNLVPLDGLYLIYS 137
 QY 61 QVLFSGQGPCSTHLLTHTISRIASVYOTRVNLLSAIASPCORETPEGAEALPWYEPIYL 120
 DB 138 QVLFKGQGPCSTHLLTHTISRIASVYQKVNLLSAIKSPCHTESPEQAEKTPWEPIYL 197
 QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
 DB 198 GGVFQLEKGDRLSAEINQPNYLDFAESGQVYFGIIAL 234
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 ID O97538_AOTVO PRELIMINARY; PRT; 149 AA.
 AC O97538
 DT 01-MAY-1999 (TrEMBLrel. 10, Created)
 DT 01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
 DE Tumor necrosis factor alpha (Fragment).
 GN Name=TNF-alpha;
 OS Aotus vociferans (Spix's owl monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae; Aotinae; Aotus.
 OX NCBI_TaxID=57176;
 RN [1]

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RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
RL EMBL; AF014508; AAD01534.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SNR; O97538; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
DR NON_TER 1
FT NON_TER 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 86.0%; Score 693; DB 2; Length 149;
Best Local Similarity 89.3%; Pred. No. 1.2e-62;
Matches 133; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

QY 8 PSDAPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYSQVLFSGQ 67
DB 1 PSDKPVAVVAVNPAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYSQVLFKQG 60

QY 68 GCPSTHVLLTHTSIRIAVSQYQTRVNLLSAISPQRETPEGAEALPMWYEPYILGGVFOLE 127
DB 61 GCFSTFMLLTHSIRIAVSQYQAKVNLLSAISKPCQRETPRGAKTNPWYEPYILGGVFOLE 120

QY 128 TGDRLSAEINRPDYLDPAESGQVYFGIIA 156
DB 121 KGDRLSAEINLPDYLDLAESGQVYFGIIA 149

Search completed: May 5, 2006, 11:26:01
Job time : 53.5 secs

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RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
RL EMBL; AF014508; AAD01534.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SNR; O97538; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
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DR NON_TER 1
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Query Match 86.0%; Score 693; DB 2; Length 149;
Best Local Similarity 89.3%; Pred. No. 1.2e-62;
Matches 133; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

QY 8 PSDAPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYSQVLFSGQ 67
DB 1 PSDKPVAVVAVNPAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYSQVLFKQG 60

QY 68 GCPSTHVLLTHTSIRIAVSQYQTRVNLLSAISPQRETPEGAEALPMWYEPYILGGVFOLE 127
DB 61 GCFSTFMLLTHSIRIAVSQYQAKVNLLSAISKPCQRETPRGAKTNPWYEPYILGGVFOLE 120

QY 128 TGDRLSAEINRPDYLDPAESGQVYFGIIA 156
DB 121 KGDRLSAEINLPDYLDLAESGQVYFGIIA 149

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ID Q9TTG8_AOTNI PRELIMINARY; PRT; 149 AA.
AC Q9TTG8;
DT 01-MAY-2000 (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (fragment).
GN Name=TNF-alpha;
OS Aotus nigriceps (Black-headed owl monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Aotinae; Aotus.
OX NCBI_TaxID=57175;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
RL EMBL; AF097328; AAF21303.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; Q9TTG8; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.

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GenCore version 5.1.7
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 11:22:28 ; Search time 15.25 seconds
(without alignments)
851.153 Million cell updates/sec

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Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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6: /cgn2_6/ptodata/1/iaa/backfile1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	777	96.4	157	1	US-08-041-648-2
3	777	96.4	157	1	US-08-107-235-1
4	777	96.4	157	1	US-08-217-529-2
5	777	96.4	157	1	US-08-318-193-86
6	777	96.4	157	1	US-08-397-470-1
7	777	96.4	157	1	US-08-192-102-1
8	777	96.4	157	1	US-08-324-799-1
9	777	96.4	157	1	US-08-538-875-1
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11	777	96.4	157	1	US-08-500-860A-35
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17	777	96.4	157	2	US-08-192-093A-1
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19	777	96.4	157	2	US-09-496-118B-7
20	777	96.4	157	2	US-08-395-456C-17
21	777	96.4	157	2	US-08-487-453A-17
22	777	96.4	157	2	US-09-582-450-13
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45	777	96.4	233	2	US-09-589-287B-3

ALIGNMENTS

RESULT 1
US-07-794-400-1
; Sequence 1, Application US/07794400
; Patent No. 5422104
; GENERAL INFORMATION:
; APPLICANT: Fiers, W.
; APPLICANT: Tavernier, J.
; APPLICANT: Van Oostade, X.
; TITLE OF INVENTION: TNF-Mutens
; NUMBER OF SEQUENCES: 24
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07794,400
; FILING DATE: 19911120
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: Protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
; US-07-794-400-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;

APPLICANT: Banner, David
APPLICANT: Lesslauer, Werner
APPLICANT: Letscher, Hansreudt
APPLICANT: Stuber, Dietrich
TITLE OF INVENTION: Tumor Necrosis Factor Muteins
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: U.S.
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/217,529
FILING DATE: 24-MAR-1994
CLASSIFICATION: 530
PRIOR APPLICATION NUMBER: EP 93810224.1
FILING DATE: 29-MAR-1993
ATTORNEY/AGENT INFORMATION:
NAME: Roseman, Catherine R
REGISTRATION NUMBER: 34240
REFERENCE/DOCKET NUMBER: 4105/155
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-6208
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-217-529-2

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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DB 1 VRSSRTPSDKPVAVHVNANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60

QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLISAIASPCQRETPEGAEALPWYPIYL 120
DB 61 QVLFKGQGCPSHTVLLTHTISRIVSYQTKVNLISAIKSPCQRETPEGAEALPWYPIYL 120

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DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIAL 157

RESULT 5
US-08-318-193-86
Sequence 86, Application US/08318193
Patent No. 5641663
GENERAL INFORMATION:
APPLICANT: GARVIN, Robert T.
APPLICANT: MALEK, Lawrence T.
TITLE OF INVENTION: AN EXPRESSION SYSTEM FOR THE SECRETION
TITLE OF INVENTION: OF BIOACTIVE HUMAN GRANULOCYTE MACROPHAGE COLONY
TITLE OF INVENTION: STIMULATING FACTOR (GM-CSF) AND OTHER HETEROLOGOUS
TITLE OF INVENTION: PROTEINS FROM STREPTOMYCES
NUMBER OF SEQUENCES: 91
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500
CITY: Alexandria

STATE: Virginia
COUNTRY: USA
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/318,193
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,314
FILING DATE:
APPLICATION NUMBER: US 07/224,568
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 18740/116 CACO
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-9300
TELEFAX: (703) 683-4109
TELEX: 899149
INFORMATION FOR SEQ ID NO: 86:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-318-193-86

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLISAIASPCQRETPEGAEALPWYPIYL 120
DB 61 QVLFKGQGCPSHTVLLTHTISRIVSYQTKVNLISAIKSPCQRETPEGAEALPWYPIYL 120

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIAL 157

RESULT 6
US-08-397-470-1
Sequence 1, Application US/08397470
Patent No. 5652353
GENERAL INFORMATION:
APPLICANT: Fiers, W.
APPLICANT: Tavernier, J.
APPLICANT: Van Oostade, X.
TITLE OF INVENTION: TNF-Mutins
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/397,470

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; FILING DATE: 01-MAR-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/794,400
; FILING DATE: 20-NOV-1991
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
;
US-08-397-470-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
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Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESGVYFGIALL 157

RESULT 7
US-08-192-102-1
; Sequence 1, Application US/08192102
; Patent No. 5656272
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Ghirayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND ASSAYS EMPLOYING
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
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; FILING DATE: 04-FEB-1994
; CLASSIFICATION: 424

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; FILING DATE: 01-MAR-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/794,400
; FILING DATE: 20-NOV-1991
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
;
US-08-397-470-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
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; Sequence 1, Application US/08324799
; Patent No. 5698195
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Ghirayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND PEPTIDES
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND PEPTIDES
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/324,799
FILING DATE: 18-OCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,093
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,102
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,861
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/192,861
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NYU93-01M4
TELEPHONE: (617) 861-6240
TELEFAX: (617) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-324-799-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
QY 61 QVLFSGGCPSTHLLTHTISRIAVSYQTRVNLLSAISPCCQRETPEGAALPWPYPIYL 120
DB 61 QVLFKGGCPSTHLLTHTISRIAVSYQTKVNLLSAISPCCQRETPEGAALPWPYPIYL 120
QY 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 9
US-08-538-875-1
Sequence 1, Application US/08538875
Patent No. 5773582
GENERAL INFORMATION:
APPLICANT: Shin, Hang-Cheol
APPLICANT: Lee, Inkyung
APPLICANT: Kang, Sungzong
TITLE OF INVENTION: TUMOR NECROSIS FACTOR MUTEINS
NUMBER OF SEQUENCES: 73
CORRESPONDENCE ADDRESS:

ADDRESSEE: Shin, Hang-Cheol
STREET: Jukong Gocheung Apt. 1014-806, Haan-dong
CITY: Kwangmyung-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 423-060
ADDRESSEE: Shin, Nam-Kyu
STREET: #181-404 Sadang-4-dong, Dongjak-ku
CITY: Seoul
STATE: Republic of Korea
ZIP: 156-094
ADDRESSEE: Lee, Inkyung
STREET: 11/2, #302-39 Juan-4-dong, Nam-ku
CITY: Incheon
STATE: Republic of Korea
ZIP: 402-204
ADDRESSEE: Kang, Sungzong
STREET: #84-4 Daeshin-dong, Seodaemun-ku
CITY: Seoul
STATE: Republic of Korea
ZIP: 120-160
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette 3.5inch 2.0Mb storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/538,875
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/193,336
FILING DATE:
APPLICATION NUMBER: KR 93-1751
FILING DATE: 9-FEB-1993
ATTORNEY/AGENT INFORMATION:
NAME:
REGISTRATION NUMBER:
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE:
TELEFAX:
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-538-875-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
QY 61 QVLFSGGCPSTHLLTHTISRIAVSYQTRVNLLSAISPCCQRETPEGAALPWPYPIYL 120
DB 61 QVLFKGGCPSTHLLTHTISRIAVSYQTKVNLLSAISPCCQRETPEGAALPWPYPIYL 120
QY 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 10
US-08-394-600B-17

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; Sequence 17, Application US/08394600B
; Patent No. 5843693
; GENERAL INFORMATION:
; APPLICANT: Halenbeck, Robert F.
; APPLICANT: Jewell, David A.
; APPLICANT: Koths, Kirston E.
; APPLICANT: Krieger, Michael
; APPLICANT: Perez, Carl
; TITLE OF INVENTION: Compositions for the Inhibition of
; TITLE OF INVENTION: Protein Hormone Formation and Uses Thereof
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street; 34th Floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/394,600B
; FILING DATE: 02/27/95
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Donald J. Pochopien
; REGISTRATION NUMBER: 32,167
; REFERENCE/DOCKET NUMBER: 820,005/11850US05
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX:
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-394-600B-17

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Qy 61 QVLFSGQGPCSTHLLTHTISRIASVQTRVNLLSAISPQORETPEGAEALPWTEPIYL 120
Db 61 QVLFKGGQPCSTHLLTHTISRIASVQTKVNLLSAISPQORETPEGAEAKPWTEPIYL 120
Qy 121 GGVFQLEKGRDLSAEINRPDYLDFAESQGVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESQGVYFGIALL 157

RESULT 11
US-08-500-860A-35
; Sequence 35, Application US/08500860A
; Patent No. 5891679
; GENERAL INFORMATION:
; APPLICANT: LUCAS, RUDOLPH
; APPLICANT: DE BAETSELIER, PATRICK
; APPLICANT: FRANSSEN, LUCIE
; APPLICANT: SABLON, ERWIN
; TITLE OF INVENTION: TNF-MUTEINS, A PROCESS FOR PREPARING THEM AND
; TITLE OF INVENTION: THEIR USE AS ACTIVE SUBSTANCES IN PHARMACEUTICAL COMPOSITIONS
; NUMBER OF SEQUENCES: 36
; CORRESPONDENCE ADDRESS:
```

```
; ADDRESSEE: NIXON & VANDERHUYE P.C.
; STREET: 1100 NORTH GLEBE ROAD
; CITY: ARLINGTON
; STATE: VIRGINIA
; COUNTRY: U.S.A.
; ZIP: 22201-4714
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/500,860A
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: BYRNE, THOMAS E.
; REGISTRATION NUMBER: 32,205
; REFERENCE/DOCKET NUMBER: 1487-8
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703)816-4000
; TELEFAX: (703)816-4100
; TELEX: 200797 NIXN UR
; INFORMATION FOR SEQ ID NO: 35:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-500-860A-35

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Qy 61 QVLFSGQGPCSTHLLTHTISRIASVQTRVNLLSAISPQORETPEGAEALPWTEPIYL 120
Db 61 QVLFKGGQPCSTHLLTHTISRIASVQTKVNLLSAISPQORETPEGAEAKPWTEPIYL 120
Qy 121 GGVFQLEKGRDLSAEINRPDYLDFAESQGVYFGIALL 157
Db 121 GGVFQLEKGRDLSAEINRPDYLDFAESQGVYFGIALL 157

RESULT 12
US-08-192-861A-1
; Sequence 1, Application US/08192861A
; Patent No. 5919452
; GENERAL INFORMATION:
; APPLICANT: Le, Junning
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: METHODS OF TREATING TNF-MEDIATED DISEASE USING
; TITLE OF INVENTION: CHIMERIC ANTI-TNF ANTIBODIES (As Amended)
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; STREET: Two Militia Drive
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/192,861A
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NYU93-01M2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (781) 861-6240
TELEFAX: (781) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-192-861A-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSSTPSDAPVAHVANPOAEGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSSTPSDKPVAHVANPOAEGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHHTISRIAVSYQTRVNLSSAIAISPCQRETPEGAEALPWYEPYIL 120
DB 61 QVLFSGGCGPSTHVLTHHTISRIAVSYQTRVNLSSAIAISPCQRETPEGAEALPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 13
US-08-600-783-5
Sequence 5, Application US/08600783
Patent No. 5962267
GENERAL INFORMATION:
APPLICANT: SHIN, Hang Cheol
APPLICANT: CHANG, Seung Gu
APPLICANT: KIM, Dae Young
APPLICANT: KIM, Chong Suh
TITLE OF INVENTION: Proinsulin Derivative and Process
TITLE OF INVENTION: for Producing Human Insulin
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: SHIN, Hang Cheol
STREET: Ssangma-Hansein Apt. 102-1206,
STREET: #245 Cholsan-dong
CITY: Kwangmyung-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 423-030
ADDRESSEE: CHANG, Seung Gu

STREET: Hyundai Apt. 71-203, Apkujong-dong,
STREET: Kangnam-ku
CITY: Seoul
STATE: Seoul
COUNTRY: Republic of Korea
ZIP: 135-110
ADDRESSEE: KIM, Dae Young
STREET: Sosa Jukong Apt. 108-202, Sosa Bon-dong,
STREET: Sosa-ku
CITY: Bucheon-ahi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 422-230
ADDRESSEE: KIM, Chong Suh
STREET: Garden Heights Apt. 202-801, #100,
STREET: Hwangkeum-dong, Soosung-ku
CITY: Taegu
STATE: Taegu
COUNTRY: Republic of Korea
ZIP: 706-040
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk, 3.5 inch, 1.44MB storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/600,783
FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: KR 95-2751
FILING DATE: 15-FEB-1995
ATTORNEY/AGENT INFORMATION:
NAME: Shahan Islam
REGISTRATION NUMBER: 32,507
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 278-1000
TELEFAX: (212) 953-7249
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-600-783-5

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSSTPSDAPVAHVANPOAEGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSSTPSDKPVAHVANPOAEGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60

QY 61 QVLFSGGCGPSTHVLTHHTISRIAVSYQTRVNLSSAIAISPCQRETPEGAEALPWYEPYIL 120
DB 61 QVLFSGGCGPSTHVLTHHTISRIAVSYQTRVNLSSAIAISPCQRETPEGAEALPWYEPYIL 120

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 14
US-08-584-031-13
Sequence 13, Application US/08584031A
Patent No. 6030945
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi J.
TITLE OF INVENTION: APO-2 LIGAND
FILE REFERENCE: 11669.22US03

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;
;
; CURRENT APPLICATION NUMBER: US/08/584,031A
; CURRENT FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
;
US-08-584-031-13

Query Match          96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||

QY 61 QVLFSGQGPCSTHVLTTHTTISRIVSYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
   |||||
Db 61 QVLFKGQGPCSTHVLTTHTTISRIVSYQTKVNLISAIKSPCORETPEGAEAKPWYEPIYL 120
   |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIALL 157
   |||||
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157
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RESULT 15
US-08-714-960B-1
; Sequence 1, Application US/08714960B
; Patent No. 6121237
;
; GENERAL INFORMATION:
; APPLICANT: RATHJEN, Deborah A
; APPLICANT: FERRANTE, Antonio
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BANNER & WITCOFF, LTD.
; STREET: 10 S. Wacker Drive, Suite 3000
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 1.44 Mb storage diskette, 3.50 inch
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: IBM compatible PC/MS-DOS
; SOFTWARE: WordPerfect version 6.1
;
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/714,960B
; FILING DATE: 17-SEP-1996
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: AU RJ9065
; FILING DATE: 12-MAR-1990
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/AU91/00086
; FILING DATE: 12-MAR-1991
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/930,415
; FILING DATE: 09-NOV-1992
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/107,235
; FILING DATE: 16-AUG-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Reiss, Robert H.
; REGISTRATION NUMBER: 32,168
; REFERENCE/DOCKET NUMBER: 92,622-B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 715-1000
; TELEFAX: (312) 715-1234
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:26:23 ; Search time 45.5 Seconds
(without alignments)
1441.741 Million cell updates/sec

Title: US-10-668-178-15

Perfect score: 806

Sequence: 1 VRSSRTSPDAPVAHVANP.....RPDYLDFAESGGVYFGIIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications_AA_Main:*

1: /cgn2_6/prodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/prodata/1/pubpaa/US08_PUBCOMB.pep:*

3: /cgn2_6/prodata/1/pubpaa/US09_PUBCOMB.pep:*

4: /cgn2_6/prodata/1/pubpaa/US10_PUBCOMB.pep:*

5: /cgn2_6/prodata/1/pubpaa/US10B_PUBCOMB.pep:*

6: /cgn2_6/prodata/1/pubpaa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	806	100.0	157	5	US-10-668-178-15
3	778	96.5	157	4	US-10-262-630-13
4	778	96.5	157	4	US-10-354-985-2
5	778	96.5	157	5	US-10-668-178-2
6	777	96.4	157	3	US-09-756-301A-1
7	777	96.4	157	3	US-09-827-703-1
8	777	96.4	157	3	US-09-854-280-19
9	777	96.4	157	3	US-09-934-465-13
10	777	96.4	157	3	US-09-766-535A-1
11	777	96.4	157	3	US-09-854-208-19
12	777	96.4	157	3	US-09-756-161A-1
13	777	96.4	157	3	US-09-903-327A-7
14	777	96.4	157	3	US-09-756-398B-1
15	777	96.4	157	3	US-09-897-724-1
16	777	96.4	157	4	US-10-010-229-1
17	777	96.4	157	4	US-10-043-450-1
18	777	96.4	157	4	US-10-044-534-1
19	777	96.4	157	4	US-10-099-007A-1
20	777	96.4	157	4	US-10-043-432-1
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23	777	96.4	157	4	US-10-262-630-9
24	777	96.4	157	4	US-10-305-347A-9
25	777	96.4	157	4	US-10-198-845-1
26	777	96.4	157	4	US-10-327-488-1
27	777	96.4	157	4	US-10-170-812-7

28	777	96.4	157	4	US-10-187-121-1	Sequence 1, Appli
29	777	96.4	157	4	US-10-176-460-1	Sequence 1, Appli
30	777	96.4	157	4	US-10-186-559-1	Sequence 1, Appli
31	777	96.4	157	4	US-10-371-961-1	Sequence 1, Appli
32	777	96.4	157	4	US-10-200-795-1	Sequence 1, Appli
33	777	96.4	157	4	US-10-319-011-1	Sequence 1, Appli
34	777	96.4	157	4	US-10-371-443-1	Sequence 1, Appli
35	777	96.4	157	4	US-10-379-866-1	Sequence 1, Appli
36	777	96.4	157	4	US-10-371-962-1	Sequence 1, Appli
37	777	96.4	157	4	US-10-354-985-1	Sequence 1, Appli
38	777	96.4	157	4	US-10-397-786A-1	Sequence 1, Appli
39	777	96.4	157	4	US-10-665-971-1	Sequence 1, Appli
40	777	96.4	157	4	US-10-637-759-1	Sequence 1, Appli
41	777	96.4	157	4	US-10-327-619-1	Sequence 1, Appli
42	777	96.4	157	4	US-10-774-118-1	Sequence 1, Appli
43	777	96.4	157	4	US-10-394-471B-17	Sequence 17, Appli
44	777	96.4	157	5	US-10-861-685-13	Sequence 13, Appli
45	777	96.4	157	5	US-10-668-178-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1

US-10-668-178-15
; Sequence 15, Application US/10668178
; Publication No. US20050013795A1
; GENERAL INFORMATION:
; APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
; APPLICANT: MAYUMI, Tadanori
; APPLICANT: TSUTSUMI, Yasuo
; APPLICANT: NAKAGAWA, Shinsaku
; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMI2A
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: Patentin version 3.3
; SEQ ID NO 15
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Synthetic Construct
US-10-668-178-15

Query Match		100.0%;	Score 806;	DB 5;	Length 157;
Best Local Similarity		100.0%;	Pred. No. 6.3e-82;		
Matches 157;		Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;
QY	1	VRSSRTSPDAPVAHVANPQAEQQLQWLNRRNALLANGVELRDNLQVVPSEGLYLIYS	60		
Db	1	VRSSRTSPDAPVAHVANPQAEQQLQWLNRRNALLANGVELRDNLQVVPSEGLYLIYS	60		
QY	61	QVLFSGQGCPSHTVLLTHTISRIASVYQTRVNLLSAIASPCQRETPGAEALPWYEPYIL	120		
Db	61	QVLFSGQGCPSHTVLLTHTISRIASVYQTRVNLLSAIASPCQRETPGAEALPWYEPYIL	120		
QY	121	GGVFQLETGDRLSAEINRPDYLDFAESGGVYFGIIAL	157		
Db	121	GGVFQLETGDRLSAEINRPDYLDFAESGGVYFGIIAL	157		

RESULT 2

US-10-668-178-16
; Sequence 16, Application US/10668178
; Publication No. US20050013795A1
; GENERAL INFORMATION:

APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
APPLICANT: MAYUMI, Tadanori
APPLICANT: TSUTSUMI, Yasuo
APPLICANT: NAKAGAWA, Shinsaku
APPLICANT: IKEGAMI, Hakuo
TITLE OF INVENTION: Biologically-active conjugate
FILE REFERENCE: MAYUMI2A
CURRENT APPLICATION NUMBER: US/10/668,178
CURRENT FILING DATE: 2003-09-24
PRIOR APPLICATION NUMBER: JP 83509/2002
PRIOR FILING DATE: 2002-03-25
PRIOR APPLICATION NUMBER: JP 185387/2002
PRIOR FILING DATE: 2002-06-26
NUMBER OF SEQ ID NOS: 16
SOFTWARE: PatentIn version 3.3
SEQ ID NO 16
LENGTH: 157
TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: synthetic (Variant protein of human tumor necrosis factor)
US-10-668-178-16

Query Match 100.0%; Score 806; DB 5; Length 157;
Best Local Similarity 100.0%; Pred. No. 6.3e-82; Mismatches 0; Indels 0; Gaps 0;
Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 VRSSRTSDAPVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTSDAPVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHVLTLTHTISRIASVYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
DB 61 QVLFSGQGCPSHVLTLTHTISRIASVYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESQGVYFGIALL 157
DB 121 GGVFOLETGDRLSAEINRPDYLDFAESQGVYFGIALL 157

RESULT 3
US-10-262-630-13
Sequence 13, Application US/10262630
Publication No. US20030138401A1
GENERAL INFORMATION:
APPLICANT: Dahiyat, Bassil I.
APPLICANT: Desjarlais, John R.
APPLICANT: Filikov, Anton
APPLICANT: Muchhal, Unesh
APPLICANT: Tansey, Malu Lourdas G.
APPLICANT: Zalevsky, Jonathan
TITLE OF INVENTION: PROTEIN BASED TNF-ALPHA VARIANTS FOR THE TREATMENT OF TNF-ALPHA
RELATED DISORDERS
FILE REFERENCE: A-68990-4/RFT/RMS/RWK
CURRENT APPLICATION NUMBER: US/10/262,630
CURRENT FILING DATE: 2003-01-27
PRIOR APPLICATION NUMBER: US 60/186,427
PRIOR FILING DATE: 2000-03-02
PRIOR APPLICATION NUMBER: US 09/945,150
PRIOR FILING DATE: 2001-08-31
PRIOR APPLICATION NUMBER: US 09/798,789
PRIOR FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: US 09/981,289
PRIOR FILING DATE: 2001-10-15
NUMBER OF SEQ ID NOS: 33
SOFTWARE: PatentIn version 3.2
SEQ ID NO 13
LENGTH: 157
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: synthetic

NAME/KEY: MISC FEATURE
LOCATION: (112)..(112)
OTHER INFORMATION: "Xaa" at position 112 can be Asp or Glu
US-10-262-630-13
Query Match 96.5%; Score 778; DB 4; Length 157;
Best Local Similarity 96.2%; Pred. No. 8.7e-79; Mismatches 5; Indels 0; Gaps 0;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSDAPVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 1 VRSSRTSDAPVAHVANPOAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSHVLTLTHTISRIASVYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
DB 61 QVLFSGQGCPSHVLTLTHTISRIASVYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESQGVYFGIALL 157
DB 121 GGVFOLETGDRLSAEINRPDYLDFAESQGVYFGIALL 157

RESULT 4
US-10-354-985-2
Sequence 2, Application US/10354985
Publication No. US20040001802A1
GENERAL INFORMATION:
APPLICANT: MAYUMI, Tadanori et al.
TITLE OF INVENTION: PHYSIOLOGICALLY ACTIVE COMPLEX
FILE REFERENCE: MAYUMI-2
CURRENT APPLICATION NUMBER: US/10/354,985
CURRENT FILING DATE: 2003-01-31
PRIOR APPLICATION NUMBER: JP 083509/2002
PRIOR FILING DATE: 2002-03-25
PRIOR APPLICATION NUMBER: JP 1185387/2002
PRIOR FILING DATE: 2002-06-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn version 3.2
SEQ ID NO 2
LENGTH: 157
TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: Variant protein of human tumor necrosis factor
FEATURE:
NAME/KEY: misc feature
LOCATION: (11)..(11)
OTHER INFORMATION: Xaa can be any naturally occurring amino acid
FEATURE:
NAME/KEY: misc feature
LOCATION: (65)..(65)
OTHER INFORMATION: Xaa can be any naturally occurring amino acid
FEATURE:
NAME/KEY: misc feature
LOCATION: (90)..(90)
OTHER INFORMATION: Xaa can be any naturally occurring amino acid
FEATURE:
NAME/KEY: misc feature
LOCATION: (98)..(98)
OTHER INFORMATION: Xaa can be any naturally occurring amino acid
FEATURE:
NAME/KEY: misc feature
LOCATION: (112)..(112)
OTHER INFORMATION: Xaa can be any naturally occurring amino acid
FEATURE:
NAME/KEY: misc feature
LOCATION: (128)..(128)
OTHER INFORMATION: Xaa can be any naturally occurring amino acid
US-10-354-985-2

Query Match 96.5%; Score 778; DB 4; Length 157;
Best Local Similarity 96.2%; Pred. No. 8.7e-79; Mismatches 6; Indels 0; Gaps 0;
Matches 151; Conservative 0; Mismatches 6; Indels 0; Gaps 0;


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RESULT 7
US-09-927-703-1
; Sequence 1, Application US/09927703
; Patent No. US2002022720A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; FILE REFERENCE: 0975.1005-013
; CURRENT APPLICATION NUMBER: US/09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-927-703-1

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPVAVHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGCPSHVLTLTHTISRIASVYQTRVNLISAIASPCQRETPEGAALPWTEPIYL 120
Db 61 QVLFKGGQCPSTHVLTLTHTISRIASVYQTKVNLISAIKSPCQRETPEGAAKPWTEPIYL 120
Qy 121 GGVFOLETGDRLSAEINRPDYLDFAESQVYFGIALL 157
Db 121 GGVFOLEKGRDLSAEINRPDYLDFAESQVYFGIALL 157

RESULT 9
US-09-934-465-13
; Sequence 13, Application US/09934465
; Patent No. US2002010223A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi J.
; TITLE OF INVENTION: APO-2 LIGAND
; FILE REFERENCE: 11669.22US03
; CURRENT APPLICATION NUMBER: US/09/934,465
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 08/584,031
; PRIOR FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-934-465-13

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPVAVHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGCPSHVLTLTHTISRIASVYQTRVNLISAIASPCQRETPEGAALPWTEPIYL 120
Db 61 QVLFKGGQCPSTHVLTLTHTISRIASVYQTKVNLISAIKSPCQRETPEGAAKPWTEPIYL 120
Qy 121 GGVFOLETGDRLSAEINRPDYLDFAESQVYFGIALL 157
Db 121 GGVFOLEKGRDLSAEINRPDYLDFAESQVYFGIALL 157

RESULT 8
US-09-854-280-19
; Sequence 19, Application US/09854280
; Patent No. US2002005207A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Goddard, Audrey
```

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RESULT 10
US-09-766-535A-1
; Sequence 1, Application US/09766535A
; Patent No. US20020106372A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-010
; CURRENT APPLICATION NUMBER: US/09/766,535A
; CURRENT FILING DATE: 2001-01-18
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-766-535A-1

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAHVANPQAGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTHHTISRIASVYQTRVNLLSAIPSCQRETPEGAELPWYPIYL 120
DB 61 QVLFKGCGCPSTHVLTHHTISRIASVYQTKVNLLSAIPSCQRETPEGAELPWYPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 11
US-09-854-208-19
; Sequence 19, Application US/09854208
; Patent No. US20020106743A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Goddard, Audrey
; APPLICANT: Gurney, Austin
```

```
; APPLICANT: Li, Hanzhong
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: IL-17 HOMOLOGOUS POLYPEPTIDES AND THERAPEUTIC USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: P1381-R1
; CURRENT APPLICATION NUMBER: US/09/854,208
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: US/09/311,832
; PRIOR FILING DATE: 1999-05-14
; PRIOR APPLICATION NUMBER: US 60/085,579
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: US 60/113,621
; PRIOR FILING DATE: 1998-12-23
; NUMBER OF SEQ ID NOS: 26
; SEQ ID NO 19
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-854-208-19

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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DB 1 VRSSRTPSDKPVAHVANPQAGQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTHHTISRIASVYQTRVNLLSAIPSCQRETPEGAELPWYPIYL 120
DB 61 QVLFKGCGCPSTHVLTHHTISRIASVYQTKVNLLSAIPSCQRETPEGAELPWYPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 12
US-09-756-161A-1
; Sequence 1, Application US/09756161A
; Patent No. US20020132307A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-007
; CURRENT APPLICATION NUMBER: US/09/756,161A
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
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Tue May 9 11:18:20 2006

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; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; FILE REFERENCE: Human Tumor Necrosis Factor
; CURRENT APPLICATION NUMBER: US/09/897,724
; PRIOR FILING DATE: 2001-07-02
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-897-724-1

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY      1 VRSSRTPSDAPVAHVYVNPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLYS 60
Db      1 VRSSRTPSDKPVAHVYVNPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLYS 60

QY      61 QVLFQCGCPSTHVLTLHTISRIASVYQTRVNLLSAIASPCQRETPEGAEALPWYEPYIL 120
Db      61 QVLFQCGCPSTHVLTLHTISRIASVYQTRVNLLSAIKSPCQRETPEGAEAKPWYEPYIL 120

QY      121 GGVFQLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
Db      121 GGVFQLEKGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
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GenCore version 5.1.7
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 11:26:47 ; Search time 9.75 Seconds
(without alignments)
745.303 Million cell updates/sec

Title: US-10-668-178-15

Perfect score: 806

Sequence: 1 VRSSRTSPDPAVHVANP.....RPDLDFABSGVVFGIATL 157

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Searched: 235405 seqs, 46284737 residues

Total number of hits satisfying chosen parameters: 235405

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

Published Applications_AA_New:*
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2: /SIDSS/ptodata/1/pubpaa/US06_NEW_PUB.pep.*
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4: /SIDSS/ptodata/1/pubpaa/US08_NEW_PUB.pep.*
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6: /SIDSS/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
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8: /SIDSS/ptodata/1/pubpaa/US10_NEW_PUB.pep.*
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12: /SIDSS/ptodata/1/pubpaa/US16_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	777	96.4	157	11	US-11-010-954-1
2	777	96.4	157	11	US-11-053-750-1
3	777	96.4	157	11	US-11-053-749-1
4	777	96.4	157	11	US-11-108-001-12
5	777	96.4	157	11	US-11-170-753-1
6	777	96.4	157	11	US-11-179-359-1
7	777	96.4	157	11	US-11-181-030-1
8	777	96.4	157	11	US-11-182-033-1
9	777	96.4	157	11	US-11-195-589-1
10	777	96.4	158	11	US-11-082-544-4
11	777	96.4	158	11	US-11-108-001-2
12	777	96.4	170	8	US-10-490-953-35
13	777	96.4	180	11	US-11-082-544-8
14	777	96.4	233	9	US-10-523-328-1
15	777	96.4	233	11	US-11-246-387-8
16	768	95.3	157	9	US-10-504-389A-55
17	632.5	78.5	235	11	US-11-032-797-8
18	486	60.3	104	11	US-11-065-669-5
19	486	60.3	104	11	US-11-249-714-5
20	214.5	26.6	177	9	US-10-999-866-61
21	214.5	26.6	205	9	US-10-995-561-1028

22	214.5	26.6	205	9	US-10-995-561-1029	Sequence 1029, Ap
23	169.5	21.0	204	11	US-11-136-341A-31	Sequence 31, Appl
24	169.5	21.0	240	11	US-11-136-341A-1	Sequence 1, Appl
25	167.5	20.8	240	8	US-10-987-663-6	Sequence 6, Appl
26	165.5	20.5	179	8	US-10-861-934-14	Sequence 14, Appl
27	165.5	20.5	179	9	US-10-861-934-14	Sequence 14, Appl
28	165.5	20.5	278	8	US-10-861-934-16	Sequence 16, Appl
29	165.5	20.5	278	8	US-10-861-934-26	Sequence 26, Appl
30	165.5	20.5	278	9	US-10-861-934-16	Sequence 16, Appl
31	165.5	20.5	278	9	US-10-861-934-26	Sequence 26, Appl
32	160.5	19.9	137	8	US-10-861-934-10	Sequence 10, Appl
33	160.5	19.9	137	8	US-10-861-934-10	Sequence 10, Appl
34	160.5	19.9	138	8	US-10-861-934-12	Sequence 12, Appl
35	160.5	19.9	138	9	US-10-861-934-12	Sequence 12, Appl
36	159.5	19.8	179	8	US-10-861-934-22	Sequence 22, Appl
37	159.5	19.8	179	9	US-10-861-934-22	Sequence 22, Appl
38	159.5	19.8	279	8	US-10-861-934-24	Sequence 24, Appl
39	159.5	19.8	279	8	US-10-861-934-32	Sequence 32, Appl
40	159.5	19.8	279	9	US-10-861-934-24	Sequence 24, Appl
41	159.5	19.8	279	9	US-10-861-934-32	Sequence 32, Appl
42	159.5	19.8	279	11	US-11-032-797-5	Sequence 5, Appl
43	156	19.4	239	11	US-11-136-341A-2	Sequence 2, Appl
44	155.5	19.3	137	8	US-10-861-934-18	Sequence 18, Appl
45	155.5	19.3	137	9	US-10-861-934-18	Sequence 18, Appl

ALIGNMENTS

RESULT 1

US-11-010-954-1
; Sequence 1, Application US/11010954
; Publication No. US20050249735A1
; GENERAL INFORMATION:
; APPLICANT: Le. Junming
; APPLICANT: Wilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Shealy, David
; TITLE OF INVENTION: Methods of Treating Ankylosing Spondylitis Using Anti-TNF Antibody
; FILE REFERENCE: 0975.1005-043
; CURRENT APPLICATION NUMBER: US/11/010,954
; CURRENT FILING DATE: 2004-12-13
; PRIOR APPLICATION NUMBER: US 10/637,759
; PRIOR FILING DATE: 2003-08-08
; PRIOR APPLICATION NUMBER: US 09/920,137
; PRIOR FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 60/236,826
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: US 60/223,360
; PRIOR FILING DATE: 2000-08-07
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-010-954-1

Query Match 96.4%; Score 777; DB 11; Length 157;

Best Local Similarity 96.2%; Pred. No. 8e-76;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSPDPAVHVANPQAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

Db 1 VRSSRTSPDPAVHVANPQAEGQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60

Qy	61	QVLFSCGCPSTHVLTHTTISRIASVYQTRVNLISATASPCQRTPEGAALPWYBPIYL	120
Db	61	QVLFSCGCPSTHVLTHTTISRIASVYQTRVNLISATASPCQRTPEGAALPWYBPIYL	120
Qy	121	GGVYQLETKDRLSAEINRPDYLDFAESGVYFGIALL	157
Db	121	GGVYQLETKDRLSAEINRPDYLDFAESGVYFGIALL	157

RESULT 2

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US-11-053-750-1
; Sequence 1, Application US/11053750
; Publication No. US20050255104A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Scallion, Bernard
; TITLE OF INVENTION: Methods of Treating Psoriasis Using
; Anti-TNF Receptor Fusion Proteins
; FILE REFERENCE: 0975.1005-045
; CURRENT APPLICATION NUMBER: US/11/053,750
; CURRENT FILING DATE: 2005-02-07
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; Remaining Prior Application data removed - See File Wrapper
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-053-749-1

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RESULT 4

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RES001.4
US-11-108-001-12
; Sequence 12, Application US/11108001
; Publication No. US20050265962A1
; GENERAL INFORMATION:
; APPLICANT: Desjarlais, John R.
; APPLICANT: Steed, Paul Michael
; APPLICANT: Zalevsky, Jonathan
; APPLICANT: Szymkowski, David Edmund
; TITLE OF INVENTION: PROTEIN BASED TNF-ALPHA VARIANTS FOR THE TREATMENT OF TNF-ALPHA
; TITLE OF INVENTION: RELATED DISORDERS

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RESULT 3


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/ FILE REFERENCE: A-68990-7
/ CURRENT APPLICATION NUMBER: US/11/108,001
/ CURRENT FILING DATE: 2005-04-14
/ PRIOR APPLICATION NUMBER: US 10/963,994
/ PRIOR FILING DATE: 2004-10-12
/ PRIOR APPLICATION NUMBER: US 09/798,789
/ PRIOR FILING DATE: 2001-03-02
/ PRIOR APPLICATION NUMBER: US 09/945,150
/ PRIOR FILING DATE: 2001-08-31
/ PRIOR APPLICATION NUMBER: US 09/981,289
/ PRIOR FILING DATE: 2001-10-15
/ PRIOR APPLICATION NUMBER: US 10/262,630
/ PRIOR FILING DATE: 2002-09-30
/ PRIOR APPLICATION NUMBER: US 60/553,908
/ PRIOR FILING DATE: 2004-03-17
/ PRIOR APPLICATION NUMBER: US 60/510,430
/ PRIOR FILING DATE: 2003-10-10
/ PRIOR APPLICATION NUMBER: US 60/509,960
/ PRIOR FILING DATE: 2003-10-09
/ PRIOR APPLICATION NUMBER: US 60/528,275
/ PRIOR FILING DATE: 2003-12-08
/ PRIOR APPLICATION NUMBER: US 60/523,647
/ PRIOR FILING DATE: 2003-11-20
/ Remaining Prior Application data removed - See File Wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: PatentIn version 3.3
/ SEQ ID NO 12
/ LENGTH: 157
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-11-108-001-12

Query Match          96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76; 5; Indels 0; Gaps 0;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
   |||||
Db 1 VRSSRTPSDKPVAVHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
   |||||

QY 61 QVLFSGQGPCSTHVLTHTSIRIAVSQYTRVNLLSAISPCQRETPEGAALPWYEPYIL 120
   |||||
Db 61 QVLFKQGGCPSTHVLTHTSIRIAVSQYTKVNLLSAIKSPCQRETPEGAALPWYEPYIL 120
   |||||

QY 121 GGVFQLETDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||

RESULT 5
US-11-170-753-1
/ Sequence 1, Application US/11/170753
/ Publication No. US20060013816A1
/ GENERAL INFORMATION:
/ APPLICANT: Le, Junming
/ APPLICANT: Vilcek, Jan
/ APPLICANT: Daddona, Peter
/ APPLICANT: Grayeb, John
/ APPLICANT: Knight, David
/ APPLICANT: Siegel, Scott
/ TITLE OF INVENTION: Methods of Treating Psoriasis Using
/ TITLE OF INVENTION: Human Anti-TNF Antibodies and Fragments
/ FILE REFERENCE: 0975.1005-050
/ CURRENT APPLICATION NUMBER: US/11/170,753
/ CURRENT FILING DATE: 2005-06-29
/ PRIOR APPLICATION NUMBER: U.S. 09/927,703
/ PRIOR FILING DATE: 2001-08-10
/ PRIOR APPLICATION NUMBER: U.S. 09/756,398
/ PRIOR FILING DATE: 2001-01-08
/ PRIOR APPLICATION NUMBER: U.S. 09/133,119
/ PRIOR FILING DATE: 1998-08-12
/ PRIOR APPLICATION NUMBER: U.S. 08/570,674
/ PRIOR FILING DATE: 1998-08-12
/ PRIOR APPLICATION NUMBER: U.S. 08/570,674
/ PRIOR FILING DATE: 1995-12-11
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/ PRIOR APPLICATION NUMBER: U.S. 08/324,799
/ PRIOR FILING DATE: 1994-10-18
/ PRIOR APPLICATION NUMBER: U.S. 08/192,102
/ PRIOR FILING DATE: 1994-02-04
/ PRIOR APPLICATION NUMBER: U.S. 08/192,861
/ PRIOR FILING DATE: 1994-02-04
/ PRIOR APPLICATION NUMBER: U.S. 08/192,093
/ PRIOR FILING DATE: 1994-02-04
/ PRIOR APPLICATION NUMBER: U.S. 08/010,406
/ PRIOR FILING DATE: 1993-01-29
/ PRIOR APPLICATION NUMBER: U.S. 08/013,413
/ Remaining Prior Application data removed - See File Wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 30
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 1
/ LENGTH: 157
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-11-170-753-1

Query Match          96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76; 5; Indels 0; Gaps 0;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
   |||||
Db 1 VRSSRTPSDKPVAVHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
   |||||

QY 61 QVLFSGQGPCSTHVLTHTSIRIAVSQYTRVNLLSAISPCQRETPEGAALPWYEPYIL 120
   |||||
Db 61 QVLFKQGGCPSTHVLTHTSIRIAVSQYTKVNLLSAIKSPCQRETPEGAALPWYEPYIL 120
   |||||

QY 121 GGVFQLETDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||

RESULT 6
US-11-179-359-1
/ Sequence 1, Application US/11/179359
/ Publication No. US20060018905A1
/ GENERAL INFORMATION:
/ APPLICANT: Le, Junming
/ APPLICANT: Vilcek, Jan
/ APPLICANT: Daddona, Peter
/ APPLICANT: Grayeb, John
/ APPLICANT: Knight, David
/ APPLICANT: Siegel, Scott
/ TITLE OF INVENTION: Methods for Treating Systemic Lupus Erythematosus
/ TITLE OF INVENTION: Using Anti-TNF Antibodies and Fragments Thereof
/ FILE REFERENCE: 0975.1005-054
/ CURRENT APPLICATION NUMBER: US/11/179,359
/ CURRENT FILING DATE: 2005-07-12
/ PRIOR APPLICATION NUMBER: U.S. 09/927,703
/ PRIOR FILING DATE: 2001-08-10
/ PRIOR APPLICATION NUMBER: U.S. 09/756,398
/ PRIOR FILING DATE: 2001-01-08
/ PRIOR APPLICATION NUMBER: U.S. 09/133,119
/ PRIOR FILING DATE: 1998-08-12
/ PRIOR APPLICATION NUMBER: U.S. 08/570,674
/ PRIOR FILING DATE: 1995-12-11
/ PRIOR APPLICATION NUMBER: U.S. 08/324,799
/ PRIOR FILING DATE: 1994-10-18
/ PRIOR APPLICATION NUMBER: U.S. 08/192,102
/ PRIOR FILING DATE: 1994-02-04
/ PRIOR APPLICATION NUMBER: U.S. 08/192,861
/ PRIOR FILING DATE: 1994-02-04
/ PRIOR APPLICATION NUMBER: U.S. 08/192,093
/ PRIOR FILING DATE: 1994-02-04
/ PRIOR APPLICATION NUMBER: U.S. 08/010,406
/ PRIOR FILING DATE: 1993-01-29
/ PRIOR APPLICATION NUMBER: U.S. 08/013,413
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; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-179-359-1

Query Match          96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
   |||||
Db 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
   |||||

QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTRVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   |||||
Db 61 QVLFQGGCPSPTHVLLTHTTISRIVSYQTKVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||

RESULT 7
US-11-181-030-1
; Sequence 1, Application US/11181030
; Publication No. US20060018906A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghrayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods for Treating Sarcoidosis Using
; FILE OF INVENTION: Anti-TNF Antibodies and Fragments Thereof
; FILE REFERENCE: 0975.1005-055
; CURRENT APPLICATION NUMBER: US/11/181,030
; CURRENT FILING DATE: 2005-07-13
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-181-030-1

Query Match          96.4%; Score 777; DB 11; Length 157;
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Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
   |||||
Db 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
   |||||

QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTRVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   |||||
Db 61 QVLFQGGCPSPTHVLLTHTTISRIVSYQTKVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||

RESULT 8
US-11-182-033-1
; Sequence 1, Application US/11182033
; Publication No. US20060018907A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghrayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Shealy, David
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of Human
; FILE OF INVENTION: Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-044
; CURRENT APPLICATION NUMBER: US/11/182,033
; CURRENT FILING DATE: 2005-07-14
; PRIOR APPLICATION NUMBER: US 10/637,759
; PRIOR FILING DATE: 2003-08-08
; PRIOR APPLICATION NUMBER: US 09/920,137
; PRIOR FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 60/236,826
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: US 60/223,360
; PRIOR FILING DATE: 2000-08-07
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-182-033-1

Query Match          96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTSPDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
   |||||
Db 1 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
   |||||

QY 61 QVLFSGQGCPSPTHVLLTHTTISRIVSYQTRVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   |||||
Db 61 QVLFQGGCPSPTHVLLTHTTISRIVSYQTKVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||

RESULT 9
US-11-195-589-1
; Sequence 1, Application US/11195589
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Publication No. US20060024310A1
GENERAL INFORMATION:
APPLICANT: Le, Junming
APPLICANT: Vilcek, Jan
APPLICANT: Daddona, Peter
APPLICANT: Ghayeb, John
APPLICANT: Knight, David
APPLICANT: Siegel, Scott
TITLE OF INVENTION: Methods of Treating TNFa-Mediated
Tissue Injury Using Anti-TNF Antibodies and Peptides
FILE REFERENCE: 0975.1005-042
CURRENT APPLICATION NUMBER: US/11/195,589
CURRENT FILING DATE: 2005-08-02
PRIOR APPLICATION NUMBER: US 09/927,703
PRIOR FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: US 09/756,398
PRIOR FILING DATE: 2001-01-08
PRIOR APPLICATION NUMBER: US 09/133,119
PRIOR FILING DATE: 1998-08-12
PRIOR APPLICATION NUMBER: US 08/570,674
PRIOR FILING DATE: 1995-12-11
PRIOR APPLICATION NUMBER: US 08/324,799
PRIOR FILING DATE: 1994-10-18
PRIOR APPLICATION NUMBER: US 08/192,102
PRIOR FILING DATE: 1994-02-04
PRIOR APPLICATION NUMBER: US 08/192,861
PRIOR FILING DATE: 1994-02-04
PRIOR APPLICATION NUMBER: US 08/192,093
PRIOR FILING DATE: 1994-02-04
PRIOR APPLICATION NUMBER: US 08/010,406
PRIOR FILING DATE: 1993-01-29
PRIOR APPLICATION NUMBER: US 08/013,413
PRIOR FILING DATE: 02-02-1993
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 1
LENGTH: 157
TYPE: PRT
ORGANISM: Homo sapiens
US-11-195-589-1

Query Match 96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCPSTHVLTHHTISRIAVSYQTVNLLSAISPCQRETPEGAEALPWYEPYIL 120
DB 61 QVLFSGGCPSTHVLTHHTISRIAVSYQTVNLLSAISPCQRETPEGAEALPWYEPYIL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 10
US-11-082-544-4
Sequence 4, Application US/11082544
Publication No. US20050249706A1
GENERAL INFORMATION:
APPLICANT: Bermudes, G.
APPLICANT: King, I.
APPLICANT: Clairmont, C.
APPLICANT: Lin, S.
APPLICANT: Belcourt, M.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TUMOR-TARGETED DELIVERY OF EFFECTOR MOLECULES
FILE REFERENCE: 8002-059
CURRENT APPLICATION NUMBER: US/11/082,544

CURRENT FILING DATE: 2005-03-17
PRIOR APPLICATION NUMBER: US/09/645,415
PRIOR FILING DATE: 2000-08-24
PRIOR APPLICATION NUMBER: 60/157,581
PRIOR FILING DATE: 1999-10-04
PRIOR APPLICATION NUMBER: 60/157,637
PRIOR FILING DATE: 1999-10-04
NUMBER OF SEQ ID NOS: 61
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 4
LENGTH: 158
TYPE: PRT
ORGANISM: Homo sapiens
US-11-082-544-4
Query Match 96.4%; Score 777; DB 11; Length 158;
Best Local Similarity 96.2%; Pred. No. 8.1e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 2 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 61
QY 61 QVLFSGGCPSTHVLTHHTISRIAVSYQTVNLLSAISPCQRETPEGAEALPWYEPYIL 120
DB 62 QVLFSGGCPSTHVLTHHTISRIAVSYQTVNLLSAISPCQRETPEGAEALPWYEPYIL 121
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 122 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL 158

RESULT 11
US-11-108-001-2
Sequence 2, Application US/11108001
Publication No. US20050265962A1
GENERAL INFORMATION:
APPLICANT: Desjarlais, John R.
APPLICANT: Steed, Paul Michael
APPLICANT: Zalevsky, Jonathan
APPLICANT: Szymkowski, David Edmund
TITLE OF INVENTION: PROTEIN BASED TNF-ALPHA VARIANTS FOR THE TREATMENT OF TNF-ALPHA
TITLE REFERENCE: A-68990-7
CURRENT APPLICATION NUMBER: US/11/108,001
CURRENT FILING DATE: 2005-04-14
PRIOR APPLICATION NUMBER: US 10/963,994
PRIOR FILING DATE: 2004-10-12
PRIOR APPLICATION NUMBER: US 09/798,789
PRIOR FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: US 09/945,150
PRIOR FILING DATE: 2001-08-31
PRIOR APPLICATION NUMBER: US 09/981,289
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: US 10/262,630
PRIOR FILING DATE: 2002-09-30
PRIOR APPLICATION NUMBER: US 60/553,908
PRIOR FILING DATE: 2004-03-17
PRIOR APPLICATION NUMBER: US 60/510,430
PRIOR FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/509,960
PRIOR FILING DATE: 2003-10-09
PRIOR APPLICATION NUMBER: US 60/528,275
PRIOR FILING DATE: 2003-12-08
PRIOR APPLICATION NUMBER: US 60/523,647
PRIOR FILING DATE: 2003-11-20
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn version 3.3
SEQ ID NO 2
LENGTH: 164
TYPE: PRT
ORGANISM: Homo sapiens

US-11-108-001-2

Query Match 96.4%; Score 777; DB 11; Length 164;
Best Local Similarity 96.2%; Pred. No. 8.5e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 8 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 67
QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 120
DB 68 QVLFKGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 127
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 128 GGVFOLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 164

RESULT 12

US-10-490-953-35
; Sequence 35, Application US/10490953
; Publication No. US20060088908A1
; GENERAL INFORMATION:
; APPLICANT: SKERRA, ARNE
; APPLICANT: SCHLEHUBER, STEFFEN
; TITLE OF INVENTION: MUTAINS OF HUMAN NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN AND
; FILE REFERENCE: 029029-0104
; CURRENT APPLICATION NUMBER: US/10/490,953
; PRIOR FILING DATE: 2004-03-29
; PRIOR APPLICATION NUMBER: PCT/EP02/10490
; PRIOR FILING DATE: 2002-09-18
; PRIOR APPLICATION NUMBER: PCT/EP02/04223
; PRIOR FILING DATE: 2002-04-16
; PRIOR APPLICATION NUMBER: PCT/EP01/11213
; PRIOR FILING DATE: 2001-09-27
; NUMBER OF SEQ ID NOS: 39
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 35
; LENGTH: 170
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: amino acid sequence
; FEATURE:
; NAME/KEY: CHAIN
; LOCATION: (1)..(170)
; OTHER INFORMATION: fusion protein of tumor necrosis factor alpha and
; OTHER INFORMATION: affinity tag
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (1)..(13)
; OTHER INFORMATION: Affinity tag Arg-Gly-Ser-His(6)-Gly(3)
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (14)..(170)
; OTHER INFORMATION: mature tumor necrosis factor alpha

US-10-490-953-35

Query Match 96.4%; Score 777; DB 8; Length 170;
Best Local Similarity 96.2%; Pred. No. 8.9e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 14 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 73
QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 120
DB 74 QVLFKGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 133

Query Match 96.4%; Score 777; DB 8; Length 170;
Best Local Similarity 96.2%; Pred. No. 8.9e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 14 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 73
QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 120
DB 74 QVLFKGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 133

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 134 GGVFOLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 170

RESULT 13

US-11-082-544-8
; Sequence 8, Application US/11082544
; Publication No. US20050249706A1
; GENERAL INFORMATION:
; APPLICANT: Bermudes, G.
; APPLICANT: King, I.
; APPLICANT: Clairmont, C.
; APPLICANT: Lin, S.
; APPLICANT: Belcourt, M.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; TITLE OF INVENTION: TUMOR-TARGETED DELIVERY OF EFFECTOR MOLECULES
; FILE REFERENCE: 8002-059
; CURRENT APPLICATION NUMBER: US/11/082,544
; CURRENT FILING DATE: 2005-03-17
; PRIOR APPLICATION NUMBER: US/09/645,415
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/157,581
; PRIOR FILING DATE: 1999-10-04
; PRIOR APPLICATION NUMBER: 60/157,637
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 61
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 8
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Fusion construct

US-11-082-544-8

Query Match 96.4%; Score 777; DB 11; Length 180;
Best Local Similarity 96.2%; Pred. No. 9.5e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
DB 24 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 83
QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 120
DB 84 QVLFKGQGCPSHTVLLTHTISRIVSYQTRVNLLSAISPCCQRETPEGAEALPWYEPIYL 143
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 144 GGVFOLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 180

RESULT 14

US-10-523-328-1
; Sequence 1, Application US/10523328
; Publication No. US20060078944A1
; GENERAL INFORMATION:
; APPLICANT: Kuai, Jun
; APPLICANT: Lin, Lih-Ling
; APPLICANT: Wooters, Joseph L.
; APPLICANT: Nickbarg, Elliot
; TITLE OF INVENTION: METHODS AND REAGENTS RELATING TO INFLAMMATION AND APOPTOSIS
; FILE REFERENCE: WYTH-FOI-001
; CURRENT APPLICATION NUMBER: US/10/523,328
; CURRENT FILING DATE: 2005-02-01
; PRIOR APPLICATION NUMBER: 60/400,410
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 1
; LENGTH: 233
; TYPE: PRT

```

; ORGANISM: Homo sapiens
US-10-523-328-1

Query Match          96.4%; Score 777; DB 9; Length 233;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||
Db 77 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136
   |||||

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLLSAIASPCQRETPEGAEALPWYEPYIL 120
   |||||
Db 137 QVLFKGQGCPSHTVLLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPYIL 196
   |||||

QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 197 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 233
   |||||

RESULT 15
US-11-246-387-8
; Sequence 8, Application US/11246387
; Publication No. US20060078994A1
; GENERAL INFORMATION:
; APPLICANT: Argos Therapeutics, Inc.
; APPLICANT: Kirin Beer Kabushiki Kaisha
; APPLICANT: Healey, Don
; APPLICANT: Tcherepanova, Irina
; APPLICANT: Adams, Melissa
; APPLICANT: Hinohara, Atsushi
; TITLE OF INVENTION: MATURE DENDRITIC CELL COMPOSITIONS AND METHODS FOR CULTURING SAME
; FILE REFERENCE: MER030
; CURRENT APPLICATION NUMBER: US/11/246,387
; CURRENT FILING DATE: 2005-10-07
; PRIOR APPLICATION NUMBER: US 60/522,512
; PRIOR FILING DATE: 2004-10-07
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 8
; LENGTH: 233
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-246-387-8

Query Match          96.4%; Score 777; DB 11; Length 233;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||
Db 77 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 136
   |||||

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLLSAIASPCQRETPEGAEALPWYEPYIL 120
   |||||
Db 137 QVLFKGQGCPSHTVLLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPYIL 196
   |||||

QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
   |||||
Db 197 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 233
   |||||

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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:07 ; Search time 74.25 Seconds
(without alignments)
929.057 Million cell updates/sec

Title: US-10-668-178-16
Perfect score: 806
Sequence: 1 VRSSRTSPDAPVHVANP.....RPDYLDFABSGQVFGIAT 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: Geneseq1980s.*
2: Geneseq1990s.*
3: Geneseq2000s.*
4: Geneseq2001s.*
5: Geneseq2002s.*
6: Geneseq2003as.*
7: Geneseq2003bs.*
8: Geneseq2004s.*
9: Geneseq2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	778	96.5	157	2	Aar62465 Tumour ne
2	778	96.5	157	8	Adh10159 Human tum
3	777	96.4	157	1	Aap60524 Sequence
4	777	96.4	157	1	Aap70095 Tumour ne
5	777	96.4	157	1	Aap70144 Amino aci
6	777	96.4	157	2	Aar14270 Human TNF
7	777	96.4	157	2	Aar14112 Neutrophil
8	777	96.4	157	2	Aar27747 Human tum
9	777	96.4	157	2	Aar42679 Human Tum
10	777	96.4	157	2	Aar38069 Human TNF
11	777	96.4	157	2	Aar62463 Tumour ne
12	777	96.4	157	2	Aar60243 Human TNF
13	777	96.4	157	2	Aar57437 Human tum
14	777	96.4	157	2	Aar28530 Human TNF
15	777	96.4	157	2	Aar40819 Human tum
16	777	96.4	157	2	Abb08912 Human tum
17	777	96.4	157	2	Aay23242 Human.tum
18	777	96.4	157	4	Aag79124 Amino aci
19	777	96.4	157	4	Aae10848 Human tum
20	777	96.4	157	4	Aag67761 Amino aci
21	777	96.4	157	4	Aab74783 Wild type
22	777	96.4	157	5	Aae18373 Human mat
23	777	96.4	157	5	Aam51166 Tumour ne
24	777	96.4	157	5	Abb76561 Human tum

25	777	96.4	157	5	ABG70571	Human tum
26	777	96.4	157	5	ABP54869	Human tum
27	777	96.4	157	5	ABP47940	Human tum
28	777	96.4	157	5	ABP54787	Human tum
29	777	96.4	157	5	ABG76348	Human ful
30	777	96.4	157	6	ABU09888	Human tum
31	777	96.4	157	6	ABG72947	Human tum
32	777	96.4	157	6	ABG75765	Human TNF
33	777	96.4	157	6	ABG75772	Human TNF
34	777	96.4	157	6	ABU63586	Human tum
35	777	96.4	157	7	ADC46568	Human tum
36	777	96.4	157	7	ADC61354	Human TNF
37	777	96.4	157	7	ADC81608	Human tum
38	777	96.4	157	7	ADD44654	Human tum
39	777	96.4	157	7	ADD89878	Human tum
40	777	96.4	157	7	AD806773	Human ant
41	777	96.4	157	7	ABW02400	Human tum
42	777	96.4	157	7	AD896348	Human tum
43	777	96.4	157	7	ABW02035	Human tum
44	777	96.4	157	7	ADF91146	Human tum
45	777	96.4	157	7	ADG27428	Human tum

ALIGNMENTS

RESULT 1
AAR62465
ID AAR62465 standard; protein; 157 AA.
XX
AC AAR62465;
XX
DT 25-MAR-2003 (revised)
DT 05-JUN-1995 (first entry)
XX
DE Tumour necrosis factor-alpha mutein K65A.
XX
KW Human; tumour necrosis factor; TNF; TNF-a; expression; mutain; mutation;
KW receptor; affinity; therapeutic; diagnostic; cancer therapy; cancer;
KW obesity; septic shock; meningitis.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 65
FT /label= Lys to Ala
XX
PN EP619372-Al.
XX
PD 12-OCT-1994.
XX
PF 17-MAR-1994; 94EP-00104154.
XX
PR 29-MAR-1993; 93EP-00810224.
XX
PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
XX
PI Banner D, Lesslauer W, Loetscher H, Stueber D;
XX
XX WPI; 1994-311810/39.
DR N-PSDB; AAQ87684.
XX
PT New human TNF-a muteins with higher affinity for p75-TNFR - useful e.g.
PT for cancer therapy, treatment of obesity and toxic shock.
XX
PS Claim 4; Page 15; 53pp; English.
XX
CC The amino acid sequence of the mutated human tumour necrosis factor alpha
CC (TNF-a). The mutein differs from the wild type at position 65 with a
CC change from a Lys residue to a Ala residue. The gene encoding the protein
CC is placed in the expression plasmid pDS56/RBSII and called
CC pDS56/RBSII.SphI-TNFA(K65A). The expression of the wild type or mutein
CC proteins is regulated by the lac repressor present on the plasmid pRBP4.
CC

CC The gene encoding the protein is mutated at specific sites resulting in a
 CC series of mutated proteins (AAR62464-83 and AAR63093-103). The biological
 CC activities of TNF are mediated via specific receptors of mol. wt. 55 and
 CC 75 kDa called p55-TNF-R and p75-TNF-R respectively. The mutated proteins
 CC presented have a higher affinity for the human p75-TNF receptor than for
 CC the p55-TNF receptor. The mutated proteins can be used in a variety of
 CC therapeutic or diagnostic applications including cancer therapy,
 CC treatment of obesity, septic shock or bacterial meningitis. (Updated on
 CC 25-MAR-2003 to correct PN field.)
 XX
 XX

Sequence 157 AA;

Query Match 96.5%; Score 778; DB 2; Length 157;
 Best Local Similarity 96.2%; Pred. No. 1.4e-71;
 Matches 151; Conservative 2; Mismatches 4; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 QY 61 QVLFSGQGPCSTHVLTTHTTISRIVSYQTRVNLSSAISPQORETPEGAEALPWTEPIYL 120
 DB 61 QVLFAGQGPCSTHVLTTHTTISRIVSYQTKVNLSSAISPQORETPEGAEALPWTEPIYL 120
 QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
 DB 121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 2
 ADH10159
 ID ADH10159 standard; protein; 157 AA.
 AC
 AC ADH10159;
 XX
 XX 11-MAR-2004 (first entry)
 DT
 XX
 DE Human tumour necrosis factor variant protein.
 XX
 XX TNF; tumour necrosis factor; polyethylene glycol; cytostatic; cancer;
 KW human; variant.
 KW
 XX Homo sapiens.
 OS
 XX

Key Location/Qualifiers
 FT Misc-difference 11
 FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu
 FT Misc-difference 65
 FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu
 FT Misc-difference 90
 FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu
 FT Misc-difference 98
 FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu
 FT Misc-difference 112
 FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu
 FT Misc-difference 128
 FT /label= Asp, Ala, Arg, Ser, Thr, Pro, Met or Leu
 XX
 EP1354893-A2.
 XX
 PD 22-OCT-2003.
 XX
 PF 30-JAN-2003; 2003EP-00250587.
 XX
 XX 25-MAR-2002; 2002JP-00083509.
 PR
 PR 26-JUN-2002; 2002JP-00185387.
 XX
 XX (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
 PA (MAYU) MAYUMI T.
 PA (TSUT) TSUTSUMI Y.
 PA (NAKA) NAKAGAWA S.
 XX
 PI Mayumi T, Tsutsumi Y, Nakagawa S, Ikegami H;

XX
 DR WPI; 2004-063952/07.
 XX
 PT A physiologically active complex which comprises a protein part with
 PT tumor necrosis factor activity and a high molecular part has higher
 PT stability and retention in living bodies and is useful to treat disease,
 PT particularly cancer.
 XX
 PS Claim 2; SEQ ID NO 2; 18pp; English.
 XX
 CC The present sequence represents a physiologically active complex which
 CC comprises a proteinaceous part with tumour necrosis factor (TNF) activity
 CC and a high molecular part bound artificially to the N-terminus of the
 CC proteinaceous part. The proteinaceous part comprises the sequence
 CC selected from ADH10159 and the molecular part has a molecular weight of
 CC 500-5000 Da and is a homopolymer of polyethylene glycol or a copolymer of
 CC ethylene glycol and its derivatives. The invention is used to treat
 CC susceptible disease, particularly cancer. The complex has a higher
 CC stability and longer retention time in living bodies than intact tumour
 CC necrosis factor. The present sequence represents a human TNF variant
 CC protein.
 XX
 SQ Sequence 157 AA;

Query Match 96.5%; Score 778; DB 8; Length 157;
 Best Local Similarity 96.2%; Pred. No. 1.4e-71;
 Matches 151; Conservative 0; Mismatches 6; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDXPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
 QY 61 QVLFSGQGPCSTHVLTTHTTISRIVSYQTRVNLSSAISPQORETPEGAEALPWTEPIYL 120
 DB 61 QVLFAGQGPCSTHVLTTHTTISRIVSYQTKVNLSSAISPQORETPEGAEALPWTEPIYL 120
 QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
 DB 121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 3
 AAP60524
 ID AAP60524 standard; protein; 157 AA.
 XX
 AC AAP60524;
 XX
 DT 25-MAR-2003 (revised)
 DT 07-AUG-1991 (first entry)
 XX
 DE Sequence of tumour necrosis factor (TNF).
 XX
 KW Anticancer agent; antitumour; antimalarial; tumour necrosis factor.
 OS Oryctolagus cuniculus.
 XX
 PN WO8603751-A.
 XX
 PD 03-JUL-1986.
 XX
 PF 19-DEC-1985; 85WO-EP000721.
 XX
 PR 21-DEC-1984; 84US-00684595.
 PR 09-OCT-1985; 85US-00785847.
 PR 09-OCT-1986; 86WO-US002133.
 XX
 PA (BIOJ) BIOGEN NV.
 PA (FIER) FIERIS W C.
 PA (ALLE) ALLET B.
 PA (BIOJ) BIOGEN INC.
 XX
 PI Fiers WC, Franssen LM, Tavernier JHL, Marmenout ALM, Vanderheyd J;
 PI Allet B;

XX WPI: 1986-182891/28.
DR N-PSDB; AAN60442.
XX Mammalian tumour necrosis factors - produced by culturing pro-karyotic
PT hosts transformed with recombinant DNA.
XX
PS Claim 11; Page 66; 93pp; English.
XX
XX TNF-like polypeptides and compans. are produced by the fermentation of
CC host cells transformed with at least one DNA sequence which codes for a
CC mammalian TNF-like polypeptide operatively linked to an expression
CC control sequence in the transformed host. (Updated on 25-MAR-2003 to
CC correct PA field.)
XX
SQ Sequence 157 AA;

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVAVNPAEGQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPVAHVAVNPAEGQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60

QY 61 QVLFSGGCGPSTHLLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYBPYIYL 120
DB 61 QVLFKGCGPSTHLLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYBPYIYL 120

QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 4
AAP70095
ID AAP70095 standard; protein; 157 AA.
XX
XX AAP70095;
XX
DT 04-APR-1991 (first entry)
XX
DE Tumour necrosis factor.
XX
KW Plasmid; tumour necrosis factor; antitumour agent.
XX
OS Escherichia coli.
XX
XX EP220482-A.
XX
PD 06-MAY-1987.
XX
XX 19-SEP-1986; 86EP-00112941.
XX
XX 30-SEP-1985; 85JP-00217740.
XX
XX (SUNR) SUNTORY LTD.
XX
XX Oshima T, Tanaka S, Matsukura S;
XX
XX WPI: 1987-124161/18.
XX
XX New plasmid for efficient tumour necrosis factor prodn. - comprises
PT plasmid with DNA fragment having phage-gene derived promoter region and E
PT coli derived transcription termination sequence.
XX
XX Claim 6; Page 17-18; 31pp; English.
XX
XX Tumour necrosis factor can be expressed using a plasmid comprising a
CC phage gene-derived promoter region upstream of the TNF structural gene
CC and an E.coli trp a gene terminator joined immediately downstream of a
CC base sequence encoding the termination of translation of the structural
CC gene. The plasmid is capable of efficient expression of TNF on a large
CC gene.

CC scale and with high purity. The transformants may achieve a TNF activity
CC 40-300 times as great as with prior transformants. TNF may comprise at
CC least 40% of total cell protein. The plasmid lacks a pBR322 derived
CC repressor of primer gene. TNF is an antitumour agent
XX
SQ Sequence 157 AA;

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVAVNPAEGQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPVAHVAVNPAEGQLWLNRRANALLANGVELRDNLVVPSEGLYIYS 60

QY 61 QVLFSGGCGPSTHLLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYBPYIYL 120
DB 61 QVLFKGCGPSTHLLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYBPYIYL 120

QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 5
AAP70144
ID AAP70144 standard; protein; 157 AA.
XX
XX AAP70144;
XX
DT 03-OCT-2002 (revised)
DT 13-MAY-1991 (first entry)
XX
XX Amino acid sequence of mature tumour necrosis factor (TNF).
XX
XX Tumour necrosis factor analogue; lymphokine; anti-tumour.
XX
XX Homo sapiens.
XX
XX EP220966-A.
XX
XX 06-MAY-1987.
XX
XX 30-OCT-1986; 86EP-00308484.
XX
XX 30-OCT-1985; 85US-00792815.
XX
XX 22-MAY-1986; 86US-00866213.
XX
XX (CETU) CETUS CORP.
XX
XX Lin LSL, Dorin G, Yamamoto R, Hanisch WH, Thomson JW, Wolfe SN;
XX
XX WPI: 1987-124486/18.
XX
XX Purified recombinant tumour necrosis factor compen. - obt'd. by using a
PT hydrophobic matrix to retain the factor followed by chromatographic
PT elution.
XX
XX Disclosure; Fig 3; 25pp; English.
XX
XX Specific examples of TNF analogues include N-terminally deleted species
CC of the protein, including those having deletions of the N-terminal
CC 1,2,3,4,5,6,7,8,9,10,14, and 31 AA's of the SQ in AAP70144. Muteins
CC lacking up to and including the first ten AA's at the N-terminus have
CC been found to have comparable or greater specific activities as compared
CC to the TNF of the SQ shown in AAP70144. Other muteins of TNF covered by
CC the method of the invention include species of TNF in which any or all of
CC the cysteine residues have been converted to serine or other neutral AA's
CC for example, glycine or alanine. In general, neutral AA replacements of
CC the cysteine at position 69 result in active TNF proteins. It appears
CC that the cysteine at position 101 is also dispensable. (Updated on 03-OCT
XX -2002 to add missing OS field.)
XX

```
SQ Sequence 157 AA;
Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSDAPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
DB 1 VRSSRTSDKPVAVHVNANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
QY 61 QVLFSGQGPCSTHVLTTHTISRIASVYQTRVNLSSAISPCORETPEGAEALPWYEPIYL 120
DB 61 QVLFSGQGPCSTHVLTTHTISRIASVYQTRVNLSSAISPCORETPEGAEALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIIAL 157
DB 121 GGVFOLEKGRLSAEINRPDYLDFAESGVYFGIIAL 157

RESULT 6
AA14270
ID AA14270 standard; peptide; 157 AA.
AC AA14270;
DT 09-JAN-1992 (first entry)
DE Human TNF.
KW Tumour necrosis factor; cytotoxic; metastasis.
XX Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1..18
FT /label= #301
FT Peptide 13..26
FT /label= #306
FT Peptide 22..40
FT /label= #307
FT Peptide 43..58
FT /label= #302
FT /note= "claim 2"
FT Peptide 54..68
FT /label= #308
FT /note= "claim 3"
FT Peptide 63..83
FT /label= #304
FT Peptide 70..80
FT /note= "claim 7"
FT Peptide 73..94
FT /label= #309
FT /note= "claim 5"
FT Peptide 79..89
FT /label= #323
FT Peptide 81..94
FT /note= "claim 6"
FT Peptide 94..109
FT /label= #303
FT Peptide 111..120
FT /label= #275
FT Peptide 132..150
FT /label= #305
FT /note= "claim 4"
XX
PN WO114702-A.
XX
PD 03-OCT-1991.
XX
PF 19-MAR-1990; 90AU-00009156.
XX
PR 19-MAR-1990; 90AU-00009156.
PR 22-NOV-1990; 90AU-00003477.
XX

SQ Sequence 157 AA;
Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSDAPVAHVANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
DB 1 VRSSRTSDKPVAVHVNANPQAEGLQWLNRANALLANGVELRDNLVVPSEGLYLYS 60
QY 61 QVLFSGQGPCSTHVLTTHTISRIASVYQTRVNLSSAISPCORETPEGAEALPWYEPIYL 120
DB 61 QVLFSGQGPCSTHVLTTHTISRIASVYQTRVNLSSAISPCORETPEGAEALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIIAL 157
DB 121 GGVFOLEKGRLSAEINRPDYLDFAESGVYFGIIAL 157

RESULT 7
AA14112
ID AA14112 standard; peptide; 157 AA.
AC AA14112;
DT 11-DEC-1991 (first entry)
DE Neutrophil stimulating peptide.
KW hTNF; AIDS; cancer; inflammatory syndromes; rheumatoid arthritis; adult respiratory distress syndrome; human tumour necrosis factor.
XX Synthetic.
XX
FH Key Location/Qualifiers
FT Peptide 1..18
FT /label= peptide 301
FT Peptide 13..26
FT /label= peptide 306
FT Peptide 22..40
FT /label= peptide 307
FT Peptide 43..58
FT /label= peptide 302
FT Peptide 54..68
FT /label= peptide 308
FT /note= "neutrophil stimulating activity and selective effects on neutrophil degranulation"
FT Peptide 63..83
FT /label= peptide 304
FT /note= "neutrophil stimulating activity"
FT Peptide 70..80
FT /label= peptide 395
FT /note= "neutrophil stimulating activity"
FT Peptide 73..94
FT /label= peptide 309
FT /note= "neutrophil stimulating activity"
FT Peptide 76..84
```



```

Db      61 QVLFKGGCPSTHLLTHTTISRIASVYQTKVLLSAIKSPCORETEGAEAKPWTEPIYL 120
QY      121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db      121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 9
AAR42679
ID AAR42679 standard; protein; 157 AA.
XX
AC AAR42679;
XX
DT 25-MAR-2003 (revised)
DT 19-APR-1994 (first entry)
XX
DE Human Tumour Necrosis Factor alpha.
XX
KW Plasmid pDS56/RBSII,Sphi-TNF-alpha; mutein; inflammation; obesity;
KW septic shock; treatment; mutagenic PCR; cytokine.
XX
OS Homo sapiens.
XX
PN EP563714-A2.
XX
PD 06-OCT-1993.
XX
PF 20-MAR-1993; 93EP-00104591.
XX
PR 02-APR-1992; 92EP-00810249.
XX
PA (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
PI Lesslauer W, Loetscher H, Stueber D;
DR WPI; 1993-313109/40.
DR N-PSDB; AA049223.
XX
PT New human Tumour Necrosis Factor mutein(s) - have amino acid change at
PT position 86, for selective binding affinity to the P55-TNF-Receptor.
XX
PS Disclosure; Fig 1b; 29pp; English.
XX
CC The human TNF-alpha expression plasmid pDS56/RBSII,Sphi-TNF-alpha was
CC used as the source of TNF-alpha gene for preparing the various TNF-alpha
CC muteins of the invention. Mutagenic PCR was used on the wild-type
CC template to introduce amino acid substitutions at sites affecting binding
CC specificity. The muteins retain binding activity to the human p55-TNF-
CC Receptor but do not bind to the human p75-TNF- Receptor. Consequently,
CC the muteins have lower systemic toxicity and only elicit some of the
CC activities of wild-type TNF-a. (Updated on 25-MAR-2003 to correct PN
CC field.)
XX
SQ Sequence 157 AA;
Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSPSDAPVAHVANPQAEQQLQMLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEQQLQMLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCPSTHLLTHTTISRIASVYQTKVLLSAIKSPCORETEGAEALPWTEPIYL 120
Db 61 QVLFKGGCPSTHLLTHTTISRIASVYQTKVLLSAIKSPCORETEGAEAKPWTEPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 11
AAR62463
ID AAR62463 standard; protein; 157 AA.
XX
AC AAR62463;
XX
DT 25-MAR-2003 (revised)
DT 02-JUN-1995 (first entry)
XX

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RESULT 10
AAR38069
ID AAR38069 standard; protein; 157 AA.
XX
AC AAR38069;
XX
DT 14-OCT-1993 (first entry)
XX
DE Human TNF-alpha.
XX
KW Withdrawal symptom; tumour necrosis factor; narcotic; nicotine; morphine;
KW thymosin; alcohol.
XX
OS Homo sapiens.
XX
PN JP05117161-A.
XX
PD 14-MAY-1993.
XX
PF 23-OCT-1991; 91JP-00337489.
XX
PR 23-OCT-1991; 91JP-00337489.
XX
PA (SOMA/) SOMA G.
PA (MIZU/) MIZUNO D.
XX
DR WPI; 1993-191442/24.
XX
PT Drugs for treating alcohol, morphine narcotics or nicotine withdrawal
PT symptoms - contg. tumour necrosis factor-alpha, thymosin tumour necrosis
PT factor fused cpd. or murine tumour necrosis factor-alpha prepd. from
PT macrophage of human or animal.
XX
PS Disclosure; Page 2-3; 5pp; Japanese.
XX
CC Drugs acting on withdrawal symptoms contain TNF, esp. TNF-alpha (AAR38069
CC and AAR38077), rTNF-S-AM1 (AAR38070), rTNF-S-AM2 (AAR38071), thymosin-
CC beta4-TNF fused cpd. (AAR38072-76). The drugs are effective in treatment
CC of withdrawal symptoms caused by habitual use of alcohol, morphine
CC narcotics or nicotine in humans or animals (e.g. swine, dog, cat,
CC chicken). The drugs may be administered as TNF at a dose of 10ng-10mg
CC orally or 5ng-1mg i.v. or 50ng-50mg percutaneously a day for a human
CC adult. In animals, the drugs may be administered according to the human
CC dosage (1/60 per kg body wt.)
XX
SQ Sequence 157 AA;
Query Match 96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.8e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSPSDAPVAHVANPQAEQQLQMLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTSPDKPVAHVANPQAEQQLQMLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCPSTHLLTHTTISRIASVYQTKVLLSAIKSPCORETEGAEALPWTEPIYL 120
Db 61 QVLFKGGCPSTHLLTHTTISRIASVYQTKVLLSAIKSPCORETEGAEAKPWTEPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 11
AAR62463
ID AAR62463 standard; protein; 157 AA.
XX
AC AAR62463;
XX
DT 25-MAR-2003 (revised)
DT 02-JUN-1995 (first entry)
XX

```

1 VRSSRTPSDAPVAHVWANPOAEGOLWLNRRANALLANGVELRDNLWPSEGLYLIYS 60

FT Region 37..42 /label= epitope
 FT Region 49..57 /label= epitope
 FT Region 59..60 /label= epitope
 FT Region 87..108 /label= epitope
 FT Region 155..157 /label= epitope
 XX US5656272-A.
 XX 12-AUG-1997.
 XX 04-FEB-1994; 94US-00192102.
 XX 18-MAR-1991; 91US-00670827.
 PR 18-MAR-1992; 92US-00853606.
 PR 11-SEP-1992; 92US-00943852.
 PR 26-JAN-1993; 93US-00010406.
 PR 02-FEB-1993; 93US-00013413.
 XX (CENZ) CENTOCOR INC.
 PA (UINY-) UNIV NEW YORK MEDICAL CENT.
 XX Dadonna P, Le J, Ghayeb J, Knight D, Siegel SA, Vilcek J;
 XX WPI; 1997-414547/38.
 XX Treatment of Crohn's disease - by administering humanised cA2 antibody
 PT specific for tumour necrosis factor.
 XX Claim 4 and 6; Fig 13; 87pp; English.
 XX An anti-TNF chimeric antibody may be administered for treating TNF-alpha
 CC mediated Crohn's disease in a human. The anti-TNF chimeric antibody
 CC competitively inhibits binding of TNF to monoclonal antibody cA2. The
 CC anti-TNF antibody does not bind to one or more epitopes in amino acids 11
 CC -13, 37-42, 49-57 or 155-157 of hTNF, but does bind to one or more
 CC epitopes included in amino acids between 87-108 or both 87-108 and 59-80
 CC of hTNF. (Updated on 25-MAR-2003 to correct PF field.)
 XX Sequence 157 AA;
 SQ
 Query Match 96.4%; Score 777; DB 2; Length 157;
 Best Local Similarity 96.2%; Pred. No. 1.8e-71;
 Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDAPVAHVAVVNPQAGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDAPVAHVAVVNPQAGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
 QY 61 QVLFSGGCGPSTHVLTLTHTISRIAVSYQTRVNLSSAIASPCQRETPEGAEALPWYPIYL 120
 DB 61 QVLFSGGCGPSTHVLTLTHTISRIAVSYQTRVNLSSAIASPCQRETPEGAEALPWYPIYL 120
 QY 121 GGVFQLEKGRSLAEINRPDYLDFAESGGVYFGIIAL 157
 DB 121 GGVFQLEKGRSLAEINRPDYLDFAESGGVYFGIIAL 157
 RESULT 15
 AA40819
 ID AA40819 standard; peptide; 157 AA.
 XX AA40819;
 XX 02-APR-1998 (first entry)
 DT Human tumour necrosis factor.
 XX Tumour necrosis factor; human; hTNF; rheumatoid arthritis; malignancy;
 KW

KW anti-TNF chimeric antibody; inhibitor; therapy; diagnosis; infection;
 KW chronic inflammatory disease; autoimmune disease;
 KW neurodegenerative disease.
 OS Homo sapiens.
 XX Key Location/Qualifiers
 FT Misc-difference 59..80 /note= "epitope recognised by antibody of the invention"
 FT Misc-difference 87..108 /note= "epitope recognised by antibody of the invention"
 FT
 XX US5698195-A.
 XX 16-DEC-1997.
 XX 18-OCT-1994; 94US-00324799.
 XX 18-MAR-1991; 91US-00670827.
 PR 18-MAR-1992; 92US-00853606.
 PR 11-SEP-1992; 92US-00943852.
 PR 29-JAN-1993; 93US-00010406.
 PR 02-FEB-1993; 93US-00013413.
 PR 04-FEB-1994; 94US-00132061.
 PR 04-FEB-1994; 94US-00192093.
 PR 04-FEB-1994; 94US-00192102.
 XX (CENZ) CENTOCOR INC.
 PA (UINY-) UNIV NEW YORK MEDICAL CENT.
 XX Siegel S, Knight D, Vilcek J, Ghayeb J, Le J, Daddona P;
 XX WPI; 1998-051431/05.
 XX Treatment of rheumatoid arthritis - with chimeric antibody directed
 PT against tumour necrosis factor.
 XX Claim 3; Col 97-100; 93pp; English.
 XX This sequence represents the human tumour necrosis factor (hTNF).
 CC Epitopes of this sequence are recognised by the antibody used in the
 CC method of the invention. The method of the invention is for treating
 CC rheumatoid arthritis in a human, and comprises administering to the human
 CC an effective TNF-inhibiting amount of an anti-TNF chimeric antibody (Ab),
 CC where the anti-TNF chimeric Ab comprises a non-human variable region or a
 CC TNF antigen binding portion of the variable region, and a human constant
 CC region. The method can be used for in vitro, in situ and/or in vivo
 CC diagnosis and/or treatment of animal cells, tissues or pathologies
 CC associated with the presence of TNF. The Abs used in the method can also
 CC be used for removing TNF from a solution or cells, inhibiting one or more
 CC biological activities of TNF in vitro, in situ or in vitro. Such removal
 CC can include treatment methods of the invention for alleviating symptoms
 CC or pathologies involving TNF, such as bacterial, viral or parasitic
 CC infections, chronic inflammatory diseases, autoimmune diseases,
 CC malignancies and/or neurodegenerative diseases
 XX Sequence 157 AA;
 SQ
 Query Match 96.4%; Score 777; DB 2; Length 157;
 Best Local Similarity 96.2%; Pred. No. 1.8e-71;
 Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDAPVAHVAVVNPQAGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
 DB 1 VRSSRTSPDAPVAHVAVVNPQAGQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
 QY 61 QVLFSGGCGPSTHVLTLTHTISRIAVSYQTRVNLSSAIASPCQRETPEGAEALPWYPIYL 120
 DB 61 QVLFSGGCGPSTHVLTLTHTISRIAVSYQTRVNLSSAIASPCQRETPEGAEALPWYPIYL 120
 QY 121 GGVFQLEKGRSLAEINRPDYLDFAESGGVYFGIIAL 157
 DB 121 GGVFQLEKGRSLAEINRPDYLDFAESGGVYFGIIAL 157

Search completed: May 5, 2006, 11:26:32
Job time : 77.25 secs

GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:42 ; Search time 18 Seconds
(without alignments)
839.224 Million cell updates/sec

Title: US-10-668-178-16
Perfect score: 806
Sequence: 1 VRSSRTSPDAPVAHVANP.....RPDYLDFAESGVYFGIIAL 157

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues
Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 80:.*
1: PIR1:.*
2: PIR2:.*
3: PIR3:.*
4: PIR4:.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	777	96.4	233	1 QWHUN	tumor necrosis fac
2	770	95.5	233	2 S22052	tumor necrosis fac
3	710	88.1	233	2 S11688	tumor necrosis fac
4	695	86.2	234	1 JQ1344	tumor necrosis fac
5	675.5	83.8	232	1 S12606	tumor necrosis fac
6	637.5	79.1	234	1 A25451	tumor necrosis fac
7	632.5	78.5	235	1 QWMSN	tumor necrosis fac
8	629	78.0	185	2 S52715	tumor necrosis fac
9	629	78.0	233	1 S24642	tumor necrosis fac
10	627	77.8	234	1 JH0529	tumor necrosis fac
11	626.5	77.7	235	2 I54490	tumor necrosis fac
12	622.5	77.2	233	2 S06192	tumor necrosis fac
13	617.5	76.6	235	2 JU0029	tumor necrosis fac
14	257.5	31.9	197	1 JH0309	tumor necrosis fac
15	252	31.3	204	1 S24641	lymphotoxin - bovi
16	246.5	30.6	204	1 S17289	tumor necrosis fac
17	240	29.8	202	1 JN0869	tumor necrosis fac
18	238.5	29.6	202	1 B27303	tumor necrosis fac
19	214.5	26.6	205	1 QWHUX	lymphotoxin alpha
20	166	20.6	244	2 A46066	lymphotoxin beta -
21	165.5	20.5	278	2 A49266	fas ligand - rat
22	159.5	19.8	279	2 A53062	fas ligand - mouse
23	151	18.7	281	2 I38707	fas ligand - human
24	142	17.6	306	2 I49139	lymphotoxin-beta -
25	128	15.9	260	2 S21738	CD40 ligand - mous
26	121	15.0	261	2 I53476	CD40 ligand - huma
27	118	14.6	261	2 S53090	CD40 ligand - bovi
28	81.5	10.1	887	2 AD2009	hypothetical prote
29	78.5	9.7	724	2 A53371	glutamate-ammonia

RESULT 1
QWHUN

tumor necrosis factor alpha precursor [validated] - human
N;Alternate names: cachectin; TNFA

C;Species: Homo sapiens (man)

C;Date: 28-Aug-1985 #sequence revision 28-Aug-1985 #text change 09-Jul-2004

C;Accession: A93585; S36153; A93351; A44189; B61478; I53311; S62610; I54522; A01646; B2

R;Nedwin, G.E.; Naylor, S.L.; Sakaguchi, A.Y.; Smith, D.; Jarrett-Nedwin, J.; Pennica, J.

Nucleic Acids Res. 13, 6361-6373, 1985

A;Title: Human lymphotoxin and tumor necrosis factor genes: structure, homology and chr

A;Reference number: A93585; MUID:86016093; PMID:2995927

A;Accession: A93585

A;Molecule type: DNA

A;Residues: 1-233 <NED>

A;Cross-references: UNIPROT:P01375; UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:93

R;Iris, F.J.M.; Bougueleret, L.; Prieur, S.; Caterina, D.; Primas, G.; Perrot, V.; Jurk

Nature Genet. 3, 137-145, 1993

A;Title: Dense Alu clustering and a potential new member of the NKkappaB family within

A;Reference number: S36152; MUID:93272029; PMID:8499947

A;Accession: S36153

A;Status: nucleic acid sequence not shown; translation not shown

A;Molecule type: DNA

A;Residues: 1-233 <IRI>

A;Cross-references: UNIPARC:UPI000000D745; EMBL:Z15026; NID:g37211; PIDN:CAA78745.1; PI

A;Note: the nucleotide sequence was submitted to the EMBL Data Library, August 1992

R;Pennica, D.; Nedwin, G.E.; Hayflick, J.S.; Seeburg, P.H.; Derynck, R.; Palladino, M.A

Nature 312, 724-729, 1984

A;Title: Human tumour necrosis factor: precursor structure, expression and homology to

A;Reference number: A93351; MUID:85086244; PMID:6392892

A;Accession: A93351

A;Molecule type: mRNA

A;Residues: 1-233 <PEN>

A;Cross-references: UNIPARC:UPI000000D745; GB:X02910; GB:X02159; NID:g37209; PIDN:CAA26

A;Note: this protein was isolated from the monocyte-like cell line HL-60 from a promyel

R;Wang, A.M.; Creasey, A.A.; Ladner, M.B.; Lin, L.S.; Strickler, J.; Van Arsdel, J.N.;

Science 228, 149-154, 1985

A;Title: Molecular cloning of the complementary DNA for human tumor necrosis factor.

A;Reference number: A44189; MUID:85142190; PMID:3856324

A;Accession: A44189

A;Molecule type: mRNA

A;Residues: 1-62, 'S', 64-233 <WAN>

A;Cross-references: UNIPARC:UPI000002FB8A; GB:M10988; NID:g339737; PIDN:AAA61198.1; PID

R;Fukuda, S.; Ando, S.; Sanou, O.; Tani, M.; Masaki, N.; Nakamura, K.I.; A

Lymphokine Res. 7, 175-185, 1988

A;Title: Simultaneous production of natural human tumor necrosis factor-alpha, -beta an

A;Reference number: A61478; MUID:88301617; PMID:2841543

A;Accession: B61478

A;Molecule type: protein

A;Residues: 83-102;109-119;121-128.'X',130-131;142-144.'X',146.'XXX',150-152;159-174;18

A;Cross-references: UNIPARC:UPI00001735C7; UNIPARC:UPI00001735C8; UNIPARC:UPI00001735C5

R;Marmenout, A.; Franssen, L.; Tavernier, J.; Van Der Heyden, J.; Tizard, R.; Kawashima,

Eur. J. Biochem. 152, 515-522, 1985

A:Title: Molecular cloning and expression of human tumor necrosis factor and comparison
A:Reference number: I53311; MUID:86030296; PMID:3932069
A:Accession: I53311
A>Status: translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-233 <MAR>
A:Cross-references: UNIPARC:UPI000000D745; GB:M26331; NID:G339763; PIDN:AAA36758.1; PID:
A:Experimental source: U-937 cells
R:Takakura-Yamamoto, R.; Yamamoto, S.; Fukuda, S.; Kurimoto, M.
Eur. J. Biochem. 235, 431-437, 1996
A:Title: O-Glycosylated species of natural human tumor-necrosis factor-alpha.
A:Reference number: S62610; MUID:96202967; PMID:8631363
A:Accession: S62610
A:Molecule type: protein
A:Residues: 77-99 <YAK>
A:Cross-references: UNIPARC:UPI00001735CD
R:D'Alfonso, S.; Richiardi, P.M.
Immunogenetics 39, 150-154, 1994
A:Title: A polymorphic variation in a putative regulation box of the TNFA promoter region
A:Reference number: I54522; MUID:94102809; PMID:7903959
A:Accession: I54522
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-8 <DAL>
A:Cross-references: UNIPARC:UPI00001735CE; GB:S68530; NID:G544751
R:Stevenson, F.T.; Birstein, S.L.; Locksley, R.M.; Lovett, D.H.
J. Exp. Med. 176, 1053-1062, 1992
A:Title: Myristyl acylation of the tumor necrosis factor alpha precursor on specific lys
A:Reference number: A59163; MUID:93018820; PMID:1402651
A:Content: annotation; identification of myristylated lysines
R:Aggarwal, B.B.; Kohr, W.J.; Haas, P.E.; Moffat, B.; Spencer, S.A.; Henzel, W.J.; Bring
J. Biol. Chem. 260, 2345-2354, 1985
A:Title: Human tumor necrosis factor. Production, purification, and characterization.
A:Reference number: A92511; MUID:85130974; PMID:3871770
A:Content: annotation; disulfide bond
C:Comment: Secreted from mitogen-activated macrophages within 4-24 hours after induction
out detriment to normal cells. It can also act synergistically with interferon gamma to
C:Comment: TNF-alpha and -beta (lymphotoxin) are the products of different genes closely
ut are produced by different cell types and have different induction kinetics.
C:Genetics:
A:Gene: GDB:TNF; TNFA
A:Cross-references: GDB:120441; OMIM:191160
A:Map position: 6P21.3-6P21.3
A:Introns: 62/3; 78/1; 94/1
C:Complex: homotrimer
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; homotrimer; lipoprotein; lymphokine; macr
F:1-76/Domain: propeptide #status predicted <PRO>
F:17-233/Product: tumor necrosis factor #status experimental <MAT>
F:19,20/binding site: myristate (Lys) (covalent) #status experimental
F:81/binding site: carboxylate (Ser) (covalent) (partial) #status experimental
F:145-177/Disulfide bonds: #status experimental

Query Match 96.4%; Score 777; DB 1; Length 233;
Best Local Similarity 96.2%; Pred. No. 1.1e-71;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYS 60
Db 77 VRSSRTPSDKPVAVHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYS 136

QY 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTRVNLSSAISPQORETPEGAALPWTEPIYL 120
Db 137 QVLFKGGCPSHTVLLTHTTISRIVSYQTKVNLSSAISPQORETPEGAALPWTEPIYL 196

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIIAL 157
Db 197 GGVFOLEKGRLSAEINRPDYLDFAESGVYFGIIAL 233

RESULT 2
S22052
tumor necrosis factor alpha precursor - baboon

C:Species: Papio sp. (baboon)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: S22052
R:Sanjanwala, M.; Edwards, A.
A:Description: Baboon Tumor Necrosis Factor Derived from Sequences of Genomic DNA.
A:Reference number: S22052
A:Accession: S22052
A>Status: preliminary
A:Molecule type: DNA
A:Residues: 1-233 <SAN>
A:Cross-references: UNIPROT:P33620; UNIPARC:UPI00001370C4; EMBL:X62141; NID:G38159; PID:
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19,20/binding site: myristate (Lys) (covalent) #status predicted
F:81/binding site: carboxylate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 95.5%; Score 770; DB 1; Length 233;
Best Local Similarity 95.5%; Pred. No. 5.6e-71;
Matches 150; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYS 60
Db 77 VRSSRTPSDKPVAVHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYS 136

QY 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTRVNLSSAISPQORETPEGAALPWTEPIYL 120
Db 137 QVLFKGGCPSHTVLLTHTTISRIVSYQTKVNLSSAISPQORETPEGAALPWTEPIYL 196

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIIAL 157
Db 197 GGVFOLEKGRLSAEINRPDYLDFAESGVYFGIIAL 233

RESULT 3
S11688
tumor necrosis factor alpha precursor - cat
C:Species: Felis silvestris catus (domestic cat)
C:Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C:Accession: S11688
R:McGraw, R.A.; Coffee, B.W.; Otto, C.M.; Drews, R.T.; Rawlings, C.A.
Nucleic Acids Res. 18, 5563, 1990
A:Title: Gene sequence of feline tumor necrosis factor alpha.
A:Reference number: S11688; MUID:91016860; PMID:2216740
A:Accession: S11688
A>Status: preliminary
A:Molecule type: DNA
A:Residues: 1-233 <MCG>
A:Cross-references: UNIPROT:P19101; UNIPARC:UPI00001370BE; EMBL:X54000; NID:G1084; PID:
C:Genetics:
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19,20/binding site: myristate (Lys) (covalent) #status predicted
F:81/binding site: carboxylate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 88.1%; Score 710; DB 2; Length 233;
Best Local Similarity 88.5%; Pred. No. 7.4e-65;
Matches 139; Conservative 6; Mismatches 12; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYS 60
Db 77 LRSSRTPSDKPVAVHVANPQAEGLQRLSRANALLANGVELTDNLQVPSDGLYLYS 136

QY 61 QVLFSGQGPCSTHLLTHTTISRIVSYQTRVNLSSAISPQORETPEGAALPWTEPIYL 120
Db 137 QVLFSGQGPCSTHLLTHTTISRIVSYQTKVNLSSAISPQORETPEGAALPWTEPIYL 196

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIIAL 157

A;Description: Complete nucleotide sequence of a cDNA

A:Cross-references: UNIPARC:UPI00001370C7; GB:M60340; GB:M35326; NID:g165754; PIDN:AAA311
C:Genetics: 62/3; 80/1; 96/1
A:Introns: 62/3; 80/1; 96/1
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; memb
F:1-81/Domain: propeptide #status predicted <PRO>
F:19-20/Binding site: myristate (Lys) (covalent) #status predicted
F:83/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:147-178/Dissulfide bonds: #status predicted

Query Match 79.1%; Score 637.5; DB 1; Length 234;
Best Local Similarity 78.3%; Pred. No. 1.9e-57;
Matches 123; Conservative 16; Mismatches 17; Indels 1; Gaps 1;

QY 1 VRSSRTPSDPAVHVANPQAEQQLQWLNRRANALLANGVELRNQLVVPSGGLYLYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 79 LRSASRALSDKPLAHVAVNPQVEGQLQWLSQRANALLANGMKLTDNQLVVPADGLYLYS 138

QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLISAIASPCQRETPEGAEALPWYEPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 139 QVLFSGQGCPSHTVLLTHTVSRFAVSYPNKNVLLSAIKSPCHRETPPEAEAPMAWYEPIYL 197

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 198 GGVFOLEKGDRLSTEVNQPEYLDLAEAGQVYFGIALL 234

RESULT 7
QWMSN
tumor necrosis factor alpha precursor - mouse
N:Alternate names: cachectin; TNF alpha
C:Species: Mus musculus (house mouse)
C:Date: 31-Mar-1988 #sequence revision 31-Mar-1988 #text change 09-Jul-2004
C:Accession: A22908; S03791; A27303; A25164; A23127; A34251; I59058; A36696
R:Shitai, T.; Shimizu, N.; Shiojiri, S.; Horiguchi, S.; Ito, H.
DNA 7, 193-201, 1988
A:Title: Cloning and expression in Escherichia coli of the gene for mouse tumor necrosis
A:Reference number: A22908; MUID:188224564; PMID:2836146
A:Accession: A22908
A:Molecule type: DNA
A:Residues: 1-235 <SHI>
A:Cross-references: UNIPROT:P06804; UNIPARC:UPI0000022334; GB:M20155
R:Shakhov, A.N.; Nedospasov, S.A.
Bioorg. Khim. 13, 701-705, 1987
A:Title: Molecular cloning of the genes coding for tumor necrosis factors: complete nucl
A:Reference number: S03791; MUID:87298639; PMID:3040015
A:Accession: S03791
A:Molecule type: DNA
A:Residues: 1-235 <SHA>
A:Cross-references: UNIPARC:UPI0000022334; GB:M38296; NID:g202086; PIDN:AAA40459.1; PID:
A:Note: article in Russian with English abstract
R:Semon, D.; Kawashima, E.; Jongeneel, C.V.; Shakhov, A.N.; Nedospasov, S.A.
Nucleic Acids Res. 15, 9083-9084, 1987
A:Title: Nucleotide sequence of the murine TNF locus, including the TNF-alpha-(tumor nec
A:Reference number: A93679; MUID:88067722; PMID:3684584
A:Accession: A27303
A:Molecule type: DNA
A:Residues: 1-235 <SEM>
A:Cross-references: UNIPARC:UPI0000022334; GB:Y00467; NID:g54830; PIDN:CAA68530.1; PID:g
R:Pennica, D.; Hayflick, J.S.; Brinman, T.S.; Palladino, M.A.; Goeddel, D.V.
Proc. Natl. Acad. Sci. U.S.A. 82, 6060-6064, 1985
A:Title: Cloning and expression in Escherichia coli of the cDNA for murine tumor necrosi
A:Reference number: A25164; MUID:85298296; PMID:3898078
A:Accession: A25164
A:Molecule type: mRNA
A:Residues: 1-235 <PEN>
A:Cross-references: UNIPARC:UPI0000022334; GB:M11731; NID:g202084; PIDN:AAA40458.1; PID:
R:Fransen, L.; Muller, R.; Marmenou, A.; Tavernier, J.; van der Heyden, J.; Kawashima,
Nucleic Acids Res. 13, 4417-4429, 1985
A:Title: Molecular cloning of mouse tumour necrosis factor cDNA and its eukaryotic expre
A:Reference number: A23127; MUID:85242112; PMID:2989794
A:Accession: A23127

A:Molecule type: mRNA
A:Residues: 1-235 <PRA>
A:Cross-references: UNIPARC:UPI0000022334; GB:X02611; NID:g54844; PIDN:CAA26457.1; PID:
J.Cseh, K.; Beutler, B.
J. Biol. Chem. 264, 16256-16260, 1989
A:Title: Alternative cleavage of the cachectin/tumor necrosis factor propeptide results
A:Reference number: A34251; MUID:89380231; PMID:2777790
A:Accession: A34251
A:Molecule type: protein
A:Residues: 70-87 <CSE>
A:Cross-references: UNIPARC:UPI00001735CF
R:Caput, D.; Beutler, B.; Hartog, K.; Thayer, R.; Brown-Shimer, S.L.; Cerami, A.
Proc. Natl. Acad. Sci. U.S.A. 83, 1670-1674, 1986
A:Title: Identification of a common nucleotide sequence in the 3'-untranslated region of
A:Reference number: I59058; MUID:86149365; PMID:2419912
A:Accession: I59058
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-230,'R',232-235 <RES>
A:Cross-references: UNIPARC:UPI000016D086; GB:M13049; NID:g202082; PIDN:AAA40457.1; PID:
R:Sherry, B.; Jue, D.M.; Zentella, A.; Cerami, A.
Biochem. Biophys. Res. Commun. 173, 1072-1078, 1990
A:Title: Characterization of high molecular weight glycosylated forms of murine tumor nec
A:Reference number: A36696; MUID:91097531; PMID:2268312
A:Accession: A36696
A:Molecule type: protein
A:Residues: 80-85,'X',87-99 <SHE>
A:Cross-references: UNIPARC:UPI00001735D0
C:Genetics:
A:Introns: 62/3; 81/1; 97/1
A:Note: the first intron occurs in the 5'-untranslated region
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; memb
F:80-235/Product: tumor necrosis factor #status experimental <MAT>
F:20/Binding site: myristate (Lys) (covalent) #status predicted
F:84/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:86/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:148-179/Dissulfide bonds: #status predicted

Query Match 78.5%; Score 632.5; DB 1; Length 235;
Best Local Similarity 75.2%; Pred. No. 6.1e-57;
Matches 118; Conservative 21; Mismatches 17; Indels 1; Gaps 1;

QY 1 VRSSRTPSDPAVHVANPQAEQQLQWLNRRANALLANGVELRNQLVVPSGGLYLYS 60
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 80 LRSSQNSDRKPAHVAVNQHVEEQLEWLSQRANALLANGMDLKNQLVVPADGLYLYS 139

QY 61 QVLFSGQGCPSHTVLLTHTISRIVSYQTRVNLISAIASPCQRETPEGAEALPWYEPIYL 120
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 140 QVLFKGQCCPD-YVLLTHTVSRFAISYQEKVNLISAVKSPCKDTPGEALKPWEPIYL 198

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 199 GGVFOLEKGDQLSAEVLNPKYLDFAESGQVYFGVIAL 235

RESULT 8
S52715
tumor necrosis factor alpha precursor - bovine (fragment)
C:Species: Bos primigenius taurus (cattle)
C:Date: 19-May-1995 #sequence_revision 21-Jul-1995 #text_change 04-Feb-2000
C:Accession: S52715
R:Mertens, B.; Gaidulis, L.
Submitted to the EMBL Data Library, March 1995
A:Description: Cloning and sequence analysis of cDNAs encoding bovine CD40 ligand and b
A:Reference number: S52715
A:Accession: S52715
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-185 <MER>
A:Cross-references: UNIPARC:UPI000016C282; EMBL:248808; NID:g755701; PIDN:CAA88743.1; PI
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein

F:33/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:97-129/Disulfide bonds: #status predicted

Query Match 78.0%; Score 629; DB 2; Length 185;
Best Local Similarity 77.7%; Pred. No. 1e-56;
Matches 122; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB LRSSSQASSNKPFVAHVADINSFQLRWDSYANALMANGVKLEDNLQVVPADGLYLIYS 88
QY 61 QVLFSGGCPSTHVLTLTHTISRIASVYQTRVNLISAIASPCQRETPEGARALPWYPIYL 120
DB 89 QVLFRCGGCPSTPLFLTHTISRIASVYQTRVNLISAIASPCCHRETPWEAKPWYPIYQ 148
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 149 GGVFOLEKGRLSAEINLPDYLDYAESGGVYFGIIAL 185

RESULT 9

S24642
tumor necrosis factor alpha precursor - bovine
C:Species: Bos primigenius taurus (cattle)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: I46047; S24642
R:Clutter, I.; Cleuter, Y.; Kettmann, R.; Burny, A.; Droogmans, L.
Cytokine 5, 336-341, 1993
A:Title: Cloning and characterization of the tandemly arranged bovine lymphotoxin and tu
A:Reference number: I46046; MUID:94083525; PMID:8260599
A:Accession: I46047
A:Status: preliminary;
A:Molecule type: DNA
A:Residues: 1-233 <CL2>
A:Cross-references: UNIPROT:Q06599; UNIPARC:UPI00001370B8; EMBL:Z14137; NID:g796; PIDN:C
C:Genetics:
A:Gene: TNFA
A:Introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:20/Binding site: myristate (Lys) (covalent) #status predicted
F:81/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

Query Match 78.0%; Score 629; DB 1; Length 233;
Best Local Similarity 77.7%; Pred. No. 1.4e-56;
Matches 122; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB LRSSSQASSNKPFVAHVADINSFQLRWDSYANALMANGVKLEDNLQVVPADGLYLIYS 136
QY 61 QVLFSGGCPSTHVLTLTHTISRIASVYQTRVNLISAIASPCQRETPEGARALPWYPIYL 120
DB 137 QVLFRCGGCPSTPLFLTHTISRIASVYQTRVNLISAIASPCCHRETPWEAKPWYPIYQ 196
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 197 GGVFOLEKGRLSAEINLPDYLDYAESGGVYFGIIAL 233

RESULT 10

JH0529
tumor necrosis factor alpha precursor - sheep
N:Alternate names: cachectin; TNF alpha
C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C:Accession: JH0529; S48118; S13114; S20661
R:Green, I.R.; Sargan, D.R.
Gene 109, 203-210, 1991
A:Title: Sequence of the cDNA encoding ovine tumor necrosis factor-alpha: problems with
A:Reference number: JH0529; MUID:92112044; PMID:1765267
A:Accession: JH0529

A:Molecule type: mRNA
A:Residues: 1-234 <GRE>

A:Cross-references: UNIPROT:P23383; UNIPARC:UPI000002CD39; EMBL:X55152; NID:g1405; PIDN:
A:Experimental source: alveolar macrophage
R:Naeh, A.D.; Barcham, G.J.; Brandan, M.R.; Andrews, A.E.
Immunol. Cell Biol. 69, 273-283, 1991
A:Title: Molecular cloning, expression and characterization of ovine TNF-alpha.
A:Reference number: S48118; MUID:92155784; PMID:1786996
A:Accession: S48118
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-234 <NAS>

A:Cross-references: UNIPARC:UPI000002CD39; EMBL:X56756; NID:g297806; PIDN:CAA40076.1; P
R:Young, A.J.; Hay, J.B.; Chan, J.Y.C.
Nucleic Acids Res. 18, 6723, 1990
A:Title: Primary structure of ovine tumor necrosis factor alpha cDNA.
A:Reference number: S13114; MUID:91067496; PMID:2251151
A:Accession: S13114
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-62,64-234 <YOU>

A:Cross-references: UNIPARC:UPI000016C4EC; EMBL:X55966; NID:g1403; PIDN:CAA39437.1; PID
A:Note: comparison with the introns of homologous sequences suggest that this is probab
C:Superfamily: tumor necrosis factor
C:Keywords: alternative splicing; cytokine; cytotoxin; glycoprotein; lipoprotein; lymph
F:1-77/Domain: propeptide #status predicted <PRO>
F:78-234/Product: tumor necrosis factor alpha #status predicted
F:20/Binding site: myristate (Lys) (covalent) #status predicted
F:82/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:96/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:146-178/Disulfide bonds: #status predicted

Query Match 77.8%; Score 627; DB 1; Length 234;
Best Local Similarity 77.7%; Pred. No. 2.2e-56;
Matches 122; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB LRSSSQASSNKPFVAHVANISAPQLRWGDSYANALMANGVELKQNLVVPDGLYLIYS 137
QY 61 QVLFSGGCPSTHVLTLTHTISRIASVYQTRVNLISAIASPCQRETPEGARALPWYPIYL 120
DB 138 QVLFRCGGCPSTPLFLTHTISRIASVYQTRVNLISAIASPCCHRETPWEAKPWYPIYQ 197
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGGVYFGIIAL 157
DB 198 GGVFOLEKGRLSAEINLPDYLDYAESGGVYFGIIAL 234

RESULT 11

I54490
tumor necrosis factor alpha precursor - white-footed mouse
C:Species: Peromyscus leucopus (white-footed mouse)
C:Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C:Accession: I54490
R:Crew, M.D.; Filipowsky, M.E.
Immunogenetics 35, 351-353, 1992
A:Title: Sequence of the tumor necrosis factor/cachectin (TNF) gene from Peromyscus leu
A:Reference number: I54490; MUID:92218012; PMID:1348497
A:Accession: I54490
A:Status: preliminary;
A:Molecule type: DNA
A:Residues: 1-235 <RES>
A:Cross-references: UNIPROT:P36939; UNIPARC:UPI00001370C5; GB:M59233; NID:g202506; PIDN:
C:Genetics:
A:Gene: PNTNF
A:Introns: 62/3; 81/1; 97/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation
F:19,20/Binding site: myristate (Lys) (covalent) #status predicted
F:84/Binding site: carbohydrate (Ser) (covalent) #status predicted

Query Match 77.7%; Score 626.5; DB 2; Length 235;

Search completed: May 5, 2006, 11:27:48
Job time : 19 secs

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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:21:53 ; Search time 53.5 Seconds
(without alignments)
2070.429 Million cell updates/sec

Title: US-10-668-178-16

Perfect score: 806

Sequence: 1 VRSSSRTPSDAPVAHVANP.....RPDYLDFAERSGVYFGIAL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Uniprot 05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	777	96.4	233	1	TNFA_HUMAN
2	777	96.4	233	2	Q5STB3_HUMAN
3	770	95.5	233	1	TNFA_PAPSP
4	768	95.3	232	1	TNFA_PANTR
5	759	94.2	233	1	TNFA_MACMU
6	756	93.8	233	1	TNFA_MACFA
7	755	93.7	233	1	TNFA_PAPHU
8	752	93.3	233	1	TNFA_PAPAN
9	742	92.1	149	2	Q97543_AOTWA
10	736	91.3	233	1	TNFA_CANFA
11	729	90.4	233	1	TNFA_FELCA
12	704	87.3	233	1	TNFA_SAISC
13	695	86.2	234	1	TNFA_HORSE
14	693	86.0	149	2	Q97538_AOTVO
15	693	86.0	149	2	Q97TGH_AOTNI
16	689	85.5	217	2	Q9BEG0_CYCDI
17	685	85.0	217	2	Q9BEG1_BRATR
18	677	84.0	233	1	TNFA_DELLE
19	675.5	83.8	232	1	TNFA_PIG
20	659	81.8	233	1	TNFA_TURTR
21	650	80.6	217	2	Q9BEE4_CABUN
22	640	79.4	136	2	Q9TGT7_AOTLE
23	639	79.3	234	1	TNFA_CAPHI
24	637.5	79.1	235	1	TNFA_RABIT
25	636	78.9	234	2	Q53ZM5_CAPHI
26	635.5	78.8	234	1	TNFA_CAVPO
27	632.5	78.5	235	1	TNFA_MOUSE
28	631	78.3	234	2	Q539C2_TUPTA
29	630	78.2	216	2	Q9BEC4_TALEU
30	630	78.2	229	1	TNFA_CEREL
31	629	78.0	233	1	TNFA_BOVIN

32	629	78.0	233	1	TNFA_BUBBU	P59693 bubalus bub
33	629	78.0	234	1	TNFA_BOSIN	P59684 bos indicus
34	627	77.8	234	1	TNFA_SHEEP	P23383 ovis aries
35	626.5	77.7	235	1	TNFA_PERLE	P36939 peromyscus
36	620.5	77.0	232	2	Q80XA4_PERMA	Q80XA4 peromyscus
37	620.5	77.0	235	2	Q5W9H9_MERUN	Q5W9H9 meriones un
38	617.5	76.6	235	1	TNFA_RAT	P16599 rattus norv
39	617.5	76.6	235	2	Q6EE11_RAT	Q6EE11 rattus norv
40	615	76.3	233	1	TNFA_CAMBA	Q75N23 camelus bac
41	615	76.3	233	1	TNFA_LAMGL	P59694 lama glama
42	609.5	75.6	156	2	Q91ZL4_SIGHI	Q91ZL4 sigmodon hi
43	605.5	75.1	216	2	Q9BEC9_OCHPR	Q9BEC9 ochotona pr
44	602.5	74.8	233	1	TNFA_MARMO	Q35734 marmota mon
45	602.5	74.8	233	2	Q6X658_MARMO	Q6X658 marmota mon

ALIGNMENTS

RESULT 1
ID TNFA_HUMAN STANDARD; PRT; 233 AA.
AC P01375; Q43647; Q9P1Q2; Q9UIV3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name:TNF; Synonyms:TNFA, TNFSF2;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87217060; PubMed=3555974;
RA Nedospasov S.A., Shakhov A.N., Turetskaya R.L., Mett V.A.,
RA Azizov M.M., Georgiev G.P., Korobko V.G., Dobrynin V.N.,
RA Filippov S.A., Bytsov N.S., Boldyreva E.F., Chuvpilo S.A.,
RA Chumakov A.M., Shingarova L.N., Ovchinnikov Y.A.;
RA "Tandem arrangement of genes coding for tumor necrosis factor (TNF-
alpha) and lymphotoxin (TNF-beta) in the human genome.";
Cold Spring Harb. Symp. Quant. Biol. 51:611-624(1986).
[2]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=85086244; PubMed=6392892;
RA Pennica D., Nedwin G.E., Hayflick J.S., Seeburg P.H., Derynck R.,
RA Palladino M.A., Kohr W.J., Aggarwal B.B., Goeddel D.V.;
RA "Human tumour necrosis factor: precursor structure, expression and
RT homology to lymphotoxin.";
RL Nature 312:724-729(1984).
[3]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=85137898; PubMed=3883195;
RA Shirai T., Yamaguchi H., Ito H., Todd C.W., Wallace R.B.;
RA "Cloning and expression in Escherichia coli of the gene for human
RT tumour necrosis factor.";
RL Nature 313:803-806(1985).
[4]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016093; PubMed=2995927;
RA Nedwin G.E., Naylor S.L., Sakaguchi A.Y., Smith D.H.,
RA Jarratt-Nedwin J., Pennica D., Goeddel D.V., Gray P.W.;
RA "Human lymphotoxin and tumor necrosis factor genes: structure,
RT homology and chromosomal localization.";
RL Nucleic Acids Res. 13:6361-6373(1985).
[5]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=85142190; PubMed=3856324;
RA Wang A.M., Creasey A.A., Ladner M.B., Lin L.S., Strickler J.,
RA van Arsdel J.N., Yamamoto R., Mark D.P.;

RT "Molecular cloning of the complementary DNA for human tumor necrosis factor." Science 228:149-154(1985).

RN [16]

RX MEDLINE=86030296; PubMed=3932069;

RA Marnenout A., Franssen L., Tavernier J., van der Heyden J., Tizard R., Kawashima E., Shaw A., Johnson M.J., Semon D., Mueller R., Ruysschaert M.R., van Vliet A., Fiers W.;

RA "Molecular cloning and expression of human tumor necrosis factor and comparison with mouse tumor necrosis factor." Eur. J. Biochem. 152:515-522(1985).

RN [7]

RX NUCLEOTIDE SEQUENCE.

RX MEDLINE=93272029; PubMed=8499947;

RA Iris F.J.M., Bougueleret L., Prieur S., Caterina D., Primas G., Perrot V., Jurka J., Rodriguez-Tome P., Claverie J.-M., Dausset J., Cohen D.;

RA "Dense Alu clustering and a potential new member of the NF kappa B family within a 90 kilobase HLA class III segment." Nat. Genet. 3:137-145(1993).

RN [18]

RX NUCLEOTIDE SEQUENCE.

RX MEDLINE=99218514; PubMed=10202016;

RA Neville M.J., Campbell R.D.;

RA "A new member of the Ig superfamily and a V-ATPase G subunit are among the predicted products of novel genes close to the TNF locus in the human MHC." J. Immunol. 162:4745-4754(1999).

RN [9]

RX NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RX PubMed=14656967; DOI=10.1101/gr.1736803;

RA Xie T., Rowen L., Aguado B., Ahearn M.E., Madan A., Qin S., Campbell R.D., Hood L.;

RA "Analysis of the gene-dense major histocompatibility complex class III region and its comparison to mouse." Genome Res. 13:2621-2636(2003).

RN [10]

RX NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RA Shiina S., Tamiya G., Oka A., Inoko H.;

RT "Homo sapiens 2,229,817bp genomic DNA of 6p21.3 HLA class I region." Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.

RN [11]

RX NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RA Shiina T., Ota M., Katsuyama Y., Hashimoto N., Inoko H.;

RT "Genome diversity in HLA: a new strategy for detection of genetic polymorphisms in expressed genes within the HLA class III and class I regions." Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.

RN [12]

RX NUCLEOTIDE SEQUENCE [GENOMIC DNA].

RA Rieder M.J., Carrington D.P., Chung M.-W., Lee K.L., Poel C.L., Yi Q., Nickerson D.A.;

RT "SeattleSNPs, NHLBI HL6682 program for genomic applications, UW-PHCRC, Seattle, WA (URL: http://pga.gs.washington.edu);"

RT Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.

RN [13]

RX NUCLEOTIDE SEQUENCE [GENOMIC DNA], AND VARIANT LEU-84.

RA Rieder M.J., Livingston R.J., Daniels M.R., Montoya M.A., Chung M.-W., Miyamoto K.E., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Wittrak L.A., Nickerson D.A.;

RT "NIHES-SNPs, environmental genome project, NIHES ES15478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu);"

RT Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.

RN [14]

RX NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

RC TISSUE=Blood;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RA Strausberg K.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Pahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.M., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalilus D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

RT "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences." Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

RN [15]

RX NUCLEOTIDE SEQUENCE OF 77-233.

RA Jang J.S., Kim B.E.;

RL Submitted (JAN-1998) to the EMBL/GenBank/DBJ databases.

RN [16]

RX NUCLEOTIDE SEQUENCE OF 84-214.

RA Shao C., Yan W., Zhu F., Yue W., Chai Y., Zhao Z., Wang C.;

RC TISSUE=Prostatic carcinoma;

RL Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.

RN [17]

RX PHOSPHORYLATION (MEMBRANE FORM).

RX MEDLINE=96170872; PubMed=8597870;

RA Pocsik E., Duda E., Wallach D.;

RT "Phosphorylation of the 26 kDa TNF precursor in monocytic cells and in transfected HeLa cells." J. Inflamm. 45:152-160(1995).

RN [18]

RX PHOSPHORYLATION BY CK1, AND DEPHOSPHORYLATION.

RX MEDLINE=99221647; PubMed=10205166; DOI=10.1093/emboj/18.8.2119;

RA Watts A.D., Hunt N.H., Wanigasekara Y., Bloomfield G., Wallach D., Roufogalis B.D., Chaudhri G.;

RT "A casein kinase I motif present in the cytoplasmic domain of members of the tumor necrosis factor ligand family is implicated in 'reverse signalling'." EMBO J. 18:2119-2126(1999).

RN [19]

RX MUTAGENESIS.

RX MEDLINE=91184128; PubMed=2009860;

RA Oscade X.V., Tavernier J., Prange T., Fiers W.;

RT "Localization of the active site of human tumor necrosis factor (hTNF) by mutational analysis." EMBO J. 10:827-836(1991).

RN [20]

RX MYRISTOYLATION.

RX MEDLINE=93018820; PubMed=1402651; DOI=10.1084/jem.176.4.1053;

RA Stevenson F.T., Bursen S.L., Locksley R.M., Lovett D.H.;

RT "Myristyl acylation of the tumor necrosis factor alpha precursor on specific lysine residues." J. Exp. Med. 176:1053-1062(1992).

RN [21]

RX CLEAVAGE BY ADAM17.

RX MEDLINE=97186575; PubMed=9034191;

RA Moss M.L., Jin S.-L.C., Milla M.E., Burkhardt W., Carter H.L., Chen W.-J., Clay W.C., Didsbury J.R., Haessler D., Hoffman C.R., Kost T.A., Lambert M.H., Leesnitzer M.A., McCauley P., McGeehan G., Mitchell J., Moyer M., Pabel G., Rocque W., Overton L.K., Schoenen P., Seaton T., Su J.-L., Warner J., Willard D., Becherer J.D.;

RT "Cloning of a disintegrin metalloproteinase that processes precursor tumor-necrosis factor-alpha." Nature 385:733-736(1997).

RN [22]

RX X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).

RX MEDLINE=89159409; PubMed=2922050; DOI=10.1038/338225a0;

RA Jones E.Y., Stuart D.I., Walker N.P.;

RT "Structure of tumor necrosis factor." Nature 338:225-228(1989).

RN [23]

RX X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).


```

SQ SEQUENCE 233 AA; 25557 MW; 455360B48DC74173 CRC64;
Query Match 95.5%; Score 770; DB 1; Length 233;
Best Local Similarity 95.5%; Pred. No. 2.7e-70;
Matches 150; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

QY 1 VRSSRTSPDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 77 VRSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 136

QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLISAIASPCQRETPGAEALPWYEPYVL 120
Db 137 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLISAIASPCQRETPGAEALPWYEPYVL 196

QY 121 GVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 197 GGVFOLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 233

RESULT 4
TNFA_PANTR
ID TNFA_PANTR STANDARD; PRT; 232 AA.
AC Q8HZD9;
DT 10-OCT-2003 (Rel. 42, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Pan troglodytes (Chimpanzee).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Pan.
OX NCBI_TaxID=9598;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22381002; PubMed=12493009;
RX DOI=10.1034/j.1600-065X.2002.19008.x;
RA Kuleki J.K., Shiina T., Anzai T., Kohara S., Inoko H.;
RA Yamagata T., Kuleki J.K., Naruse T.K., Fujimori Y., Fukuzumi Y.,
RA Yamazaki M., Tashiro H., Iwamoto C., Umehara Y., Imanishi T.,
RA Meyer A., Ikeo K., Gojobori T., Bahram S., Inoko H.;
RT "Comparative sequencing of human and chimpanzee MHC class I regions
RT unveils insertions/deletions as the major path to genomic
RT divergence."
RL Immunol. Rev. 190:95-122(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX MEDLINE=22709134; PubMed=12799463; DOI=10.1073/pnas.1230533100;
RA Anzai T., Shiina T., Kimura N., Yanagiya K., Kohara S., Shigenari A.,
RA Yamagata T., Kuleki J.K., Naruse T.K., Fujimori Y., Fukuzumi Y.,
RA Yamazaki M., Tashiro H., Iwamoto C., Umehara Y., Imanishi T.,
RA Meyer A., Ikeo K., Gojobori T., Bahram S., Inoko H.;
RT "Comparative sequencing of human and chimpanzee MHC class I regions
RT unveils insertions/deletions as the major path to genomic
RT divergence."
RL Proc. Natl. Acad. Sci. U.S.A. 100:7708-7713(2003).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 33-186.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RT specific characteristics."
RL Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation (By similarity).
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
```

```

CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AB054536; BAB83882.1; -; Genomic DNA.
CC EMBL; BA000041; BAC78157.1; -; Genomic DNA.
CC EMBL; AY091964; AAM76582.1; -; Genomic DNA.
CC HSSP; P01375; 4TSV.
CC SMR; Q8HZD9; 81-232.
CC InterPro; IPR006053; TNF_alpha.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNECROSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD02012; TNF_subf; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS0049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 232
FT Tumor necrosis factor, membrane form (By
FT similarity).
FT CHAIN 77 232
FT Tumor necrosis factor, soluble form (By
FT similarity).
FT TOPO_DOM 1 34
FT TRANSMEM 35 57
FT Signal-anchor for type II membrane
FT protein (By similarity).
FT TOPO_DOM 58 232
FT SITE 76 77
FT Extracellular (Potential).
FT MOD_RES 2 2
FT Phosphoserine (by CKI) (By similarity).
FT DISULFID 144 176
FT CONFLICT 77 77
FT G -> VR (in Ref. 3).
SQ SEQUENCE 232 AA; 25446 MW; E4D71B19C6AE0D03 CRC64;
Query Match 95.3%; Score 768; DB 1; Length 232;
Best Local Similarity 96.1%; Pred. No. 4.4e-70;
Matches 149; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 3 SSSRTSPDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYSQV 62
Db 78 SSSRTSPDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYSQV 137

QY 63 LFSGQGCPSHTVLLTHTISRIAVSYQTRVNLISAIASPCQRETPGAEALPWYEPYVL 122
Db 138 LFSGQGCPSHTVLLTHTISRIAVSYQTRVNLISAIASPCQRETPGAEALPWYEPYVL 197

QY 123 VFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 198 VFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 232

RESULT 5
TNFA_MACMU
ID TNFA_MACMU STANDARD; PRT; 233 AA.
AC P48094; Q5TM21; Q8HZD6;
DT 01-FEB-1996 (Rel. 33, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
DE Name=TNF; Synonyms=TNFA, TNFSF2;
GN Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
```

OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA]
RX MEDLINE=96003435; PubMed=7561102;
RA Villinger F.J., Brar S.S., Wayne A.E., Chikkala N., Ansari A.A.;
RT "Comparative sequence analysis of cytokine genes from human and
RT nonhuman primates."
RL J. Immunol. 155:3946-3954(1995).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
RX PubMed=15269276; DOI=10.1093/molbev/meh216;
RA Kulski J.K., Anzai T., Shih H., Inoko H.;
RT "Rhesus macaque class I duplicon structures, organization, and
RT evolution within the alpha block of the major histocompatibility
RT complex."
RL Mol. Biol. Evol. 21:2079-2091(2004).
RN [3]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA] OF 33-187.
RA O'Huigin C., Tichy H., Klein J.;
RT "Molecular evolution in higher primates; gene specific and organism
RT specific characteristics."
RL Submitted (MAR-2002) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia, under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; U19850; AAA86712.1; -; mRNA.
CC EMBL; AB128049; BAD69724.1; -; Genomic DNA.
CC EMBL; AY091567; AAM76585.1; -; Genomic DNA.
CC HSSP; P01375; 4TSV.
CC SMR; P48094; 82-233.
CC InterPro; IPR006053; TNF_abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC PANTHER; PTHR11471.SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNFCROSISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD002012; TNF_subf; 1.
CC SMART; SM00207; TNF; 1.
CC PROSITE; PS00251; TNF_1; 1.
CC PROSITE; PS0049; TNF_2; 1.
CC Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
KW CHAIN 1 233 Tumor necrosis factor, membrane form.
FT CHAIN 77 233 Tumor necrosis factor, soluble form.
FT CHAIN 1 35 Cytoplasmic (Potential).
FT TRANSMEM 36 56 Signal-anchor for type II membrane
FT protein (Potential).
FT TOPO_DOM 57 233 Extracellular (Potential).
FT SITE_ 76 77 Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
FT

FT DISULFID 145 177 By similarity.
SQ SEQUENCE 233 AA; 25630 MW; 9F6F85050595FD59 CRC64;
Query Match 94.2%; Score 759; DB 1; Length 233;
Best Local Similarity 94.3%; Pred. No. 3.7e-69;
Matches 148; Conservative 1; Mismatches 8; Indels 0; Gaps 0;
QY 1 VRSSRTSPSDAFVAHVANPQAGQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
|||||
DB 77 VRSSRTSPSDKFAHVANPQAGQLQWLNRRANALLANGVELTDNLQVVPSEGLYLIYS 136
QY 61 QVLFGGQCPSTHVLTLTHTISRIASVYQTRVNLLSAISPQORETPGGAALPWYPIYL 120
|||||
DB 137 QVLFKGGQCPSTHVLTLTHTISRIASVYQTRVNLLSAISPQORETPGGAALPWYPIYL 196
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIALL 157
|||||
DB 197 GGVFQLEKGRLSAEINRPDYLDFAESGVYFGIALL 233
RESULT 6
TNFA_MACFA
ID TNFA_MACFA STANDARD; PRT; 233 AA.
AC F79337;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9541;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RC TISSUE=Lymphocyte;
RA Tatum M.;
RT "Molecular cloning and expression of cynomolgus monkey TNF-alpha."
RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia, under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AB000513; BAA19131.1; -; mRNA.
CC HSSP; P01375; 4TSV.
CC SMR; P79337; 82-233.
CC InterPro; IPR006053; TNF_abc.
CC InterPro; IPR002959; TNF_alpha.
CC InterPro; IPR006052; TNF_family.
CC InterPro; IPR003636; TNF_subf.
CC

DR PANTHER: PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam: PF00229; TNF; 1.
 DR PRINTS: PRO1234; TNCROSISFCT.
 DR PRINTS: PRO1235; TNFALPHA.
 DR ProDom: PD002012; TNF subf; 1.
 DR SMART: SM00207; TNF; 1.
 DR PROSITE: PS00251; TNF 1; 1.
 DR PROSITE: PS0049; TNF 2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT CHAIN 77 233
 FT TOPO_DOM 1 35
 FT TRANSMEM 36 56
 FT TOPO_DOM 57 233
 FT SITE 76 77
 FT MOD_RES 2 2
 FT DISULFID 145 177
 FT SEQUENCE 233 AA; 25558 MW; 6ABF2C3AB132C217 CRC64;
 Query Match 93.8%; Score 756; DB 1; Length 233;
 Best Local Similarity 93.6%; Pred. No. 7.4e-69;
 Matches 147; Conservative 2; Mismatches 8; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
 DB 77 VRSSRTPSDKPVHVANPQAEGLQWLNRRANALLANGVELTDNLQVVPSEGLYIYS 136
 QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLSSAISPQORETPEGAEALPWYEPIYL 120
 DB 137 QVLFKGQGCPSNHVLLTHTISRIAVSYQTKVNLSSAISPQORETPEGAEALPWYEPIYL 196
 QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGVYFGIIAL 157
 DB 197 GGVFQLEKGRDLSAEINLPDYLDFAESGVYFGIIAL 233
 RESULT 7
 TNFA_PAPHU
 ID TNFA_PAPHU STANDARD; PRT; 233 AA.
 AC 077510;
 DT 15-DEC-1998 (Rel. 37, Created)
 DT 15-DEC-1998 (Rel. 37, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Papio hamadryas ursinus (Chacma baboon).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopitheidae; Cercopithecinae; Papio.
 OX NCBI_TaxID=36229;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RX MEDLINE=98147379; PubMed=948055; DOI=10.1016/S0161-5890(97)00124-7;
 RA Haudek S.B., Redl H., Schleg G., Giroir B.P.;
 RT "complementary DNA (cDNA) sequence of baboon tumor necrosis factor
 RT alpha.";
 RL Mol. Immunol. 34:1041-1042(1997).
 CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
 CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
 CC induce cell death of certain tumor cell lines. It is potent
 CC pyrogen causing fever by direct action or by stimulation of
 CC interleukin 1 secretion and is implicated in the induction of
 CC cachexia. Under certain conditions it can stimulate cell
 CC proliferation and induce cell differentiation.
 CC -!- SUBUNIT: Homotrimer (By similarity).
 CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
 CC extracellular soluble form (By similarity).
 CC -!- PTM: The soluble form derives from the membrane form by
 CC proteolytic processing (By similarity).
 CC -!- PTM: The membrane form, but not the soluble form, is

phosphorylated on serine residues. Dephosphorylation of the
 membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
 similarity).
 -!- SIMILARITY: Belongs to the tumor necrosis factor family.

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 CC use as long as its content is in no way modified and this statement is not
 CC removed.

 CC EMBL: AF019963; AAC31675.1; -; mRNA.
 DR HSSP: P01375; 4TSV.
 DR SMR: O77510; 82-233.
 DR InterPro: IPR006053; TNF_abc.
 DR InterPro: IPR002959; TNF_alpha.
 DR InterPro: IPR006052; TNF family.
 DR InterPro: IPR003636; TNF subf.
 DR PANTHER: PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam: PF00229; TNF; 1.
 DR PRINTS: PRO1234; TNCROSISFCT.
 DR PRINTS: PRO1235; TNFALPHA.
 DR ProDom: PD002012; TNF subf; 1.
 DR SMART: SM00207; TNF; 1.
 DR PROSITE: PS00251; TNF 1; 1.
 DR PROSITE: PS0049; TNF 2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233
 FT CHAIN 77 233
 FT TOPO_DOM 1 35
 FT TRANSMEM 36 56
 FT TOPO_DOM 57 233
 FT SITE 76 77
 FT MOD_RES 2 2
 FT DISULFID 145 177
 FT SEQUENCE 233 AA; 25658 MW; B940325058D4A03 CRC64;
 Query Match 93.7%; Score 755; DB 1; Length 233;
 Best Local Similarity 93.6%; Pred. No. 9.4e-69;
 Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;
 QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
 DB 77 VRSSRTPSDKPVHVANPQAEGLQWLNRRANALLANGVELTDNLQVVPSEGLYIYS 136
 QY 61 QVLFSGQGCPSHTVLLTHTISRIAVSYQTRVNLSSAISPQORETPEGAEALPWYEPIYL 120
 DB 137 QVLFKGQGCPSNHVLLTHTISRIAVSYQTKVNLSSAISPQORETPEGAEALPWYEPIYL 196
 QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGVYFGIIAL 157
 DB 197 GGVFQLEKGRDLSAEINLPDYLDFAESGVYFGIIAL 233
 RESULT 8
 TNFA_PAPAN
 ID TNFA_PAPAN STANDARD; PRT; 233 AA.
 AC P59695;
 DT 10-OCT-2003 (Rel. 42, Created)
 DT 10-OCT-2003 (Rel. 42, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
 DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
 DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Papio anubis (Olive baboon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopitheidae; Cercopithecinae; Papio.
 OX NCBI_TaxID=9555;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.

```

RX MEDLINE=211383618; PubMed=11491535; DOI=10.1007/s002510100322;
RA Villinger F.J., Bostik P., Mayne A.E., King C.L., Genain C.P.,
RA Weiss W.R., Aneari A.A.;
RT "Cloning, sequencing, and homology analysis of nonhuman primate
RT Fas/Fas-ligand and co-stimulatory molecules.";
RL Immunogenetics 53:315-328(2001).
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation (By similarity).
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; AY234222; AAC08335.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; P59695; 82-233.
DR InterPro; IPR006053; TNF_abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR006052; TNF_family.
DR InterPro; IPR003636; TNF_subf.
DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS0049; TNF_2; 1.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233
FT Tumor necrosis factor, membrane form (By
FT similarity).
FT CHAIN 77 233
FT Tumor necrosis factor, soluble form (By
FT similarity).
FT TOPO_DOM 1 34
FT Signal-anchor (Potential).
FT TRANSMEM 35 57
FT Signal-anchor for type II membrane
FT protein (By similarity).
FT TOPO_DOM 58 233
FT Extracellular (Potential).
FT SITE_76 77
FT Cleavage (by ADAM17) (By similarity).
FT MOD_RES 2 2
FT Phosphoserine (by CK1) (By similarity).
FT DISULFID 145 177
FT By similarity.
FT SEQUENCE 233 AA; 25736 MW; 0C477F9EB6CC9909 CRC64;
Query Match 93.3%; Score 752; DB 1; Length 233;
Best Local Similarity 93.6%; Pred. No. 1.9e-68;
Matches 147; Conservative 1; Mismatches 9; Indels 0; Gaps 0;

QY 1 VRSSRTPSDPAVHVAVNPQAEQQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
DB 77 VRSSRTPSDKPAHVHVAVNPQAEQQLWLNRRNALLANGVELTDNLQVVPSEGLYLIYS 136
QY 61 QVLFSGGCGPSTHLLTHTTSRIASVYQTRVNLSSAIPSCQRETPGEGALPWYEPYIL 120
DB 137 QVLFKGGCGPNSHVLLTHTTSRIASVYQTRVNLSSAIPSCQRETPGEGAKPWYEPYIL 196
QY 121 GGVFQLETKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

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Db 197 GGVFQLETKGDRLSAEINRPDYLDFAESGQVYFGIALL 233
RESULT 9
O97543 AOTNA
ID O97543 AOTNA PRELIMINARY; PRT; 149 AA.
AC O97543;
DT 01-MAY-1999 (TREMBLrel. 10, Created)
DT 01-MAY-1999 (TREMBLrel. 10, Last sequence update)
DT 01-OCT-2003 (TREMBLrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (Fragment).
GN Name=TNF-alpha;
OS Aotus nancymae (Ma's night monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Aotinae; Aotus.
OX NCBI_TaxID=37293;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
RT in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF014513; AAD01539.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; O97543; 1-149.
DR GO; GO:0015020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF_abc.
DR InterPro; IPR002959; TNF_alpha.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRINTS; PR01235; TNFALPHA.
DR ProDom; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS0049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 149
FT NON_TER 149
SQ SEQUENCE 149 AA; 16466 MW; 3C2A6140778EFA8A CRC64;
Query Match 92.1%; Score 742; DB 2; Length 149;
Best Local Similarity 96.0%; Pred. No. 1.2e-67;
Matches 143; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 8 PSDAPVHVAVNPQAEQQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYSQVLFSGQ 67
DB 1 PSDKPAHVHVAVNPQAEQQLWLNRRNALLANGVELRDNLQVVPSEGLYLIYSQVLFKQ 60
QY 68 GCPSTHLLTHTTSRIASVYQTRVNLSSAIPSCQRETPGEGALPWYEPYILGGVPOLE 127
DB 61 GCPSTHLLTHTTSRIASVYQTRVNLSSAIPSCQRETPGEGAKPWYEPYILGGVPOLE 120
QY 128 TGDRLSAEINRPDYLDFAESGQVYFGIIA 156
DB 121 KGDRLSAEINRPDYLDFAESGQVYFGIIA 149
RESULT 10
TNFA CANFA
ID TNFA CANFA STANDARD; PRT; 233 AA.
AC P51742; Q28339;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].

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GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]_TNFOTIDE SEQUENCE [GENOMIC DNA].
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RA Fiers W.;
RT "Tumour necrosis factor."; (In) Sim E. (eds.);
RL The natural immune system humoral factors, pp.65-119, IRL Press,
RL Oxford (1993).
RN [2]
RP NUCLEOTIDE SEQUENCE [MRNA].
RA Zucker K., Lu P., Fuller L., Aethana D., Esquenazi V., Miller J.;
RT "Cloning and expression of the cDNA for canine tumor necrosis factor-
alpha in E. coli."; (In) Lymphokine Res. 13:191-196(1994).
RN [3]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RA Wagner J.L., Faltis Y., Didario D.D.;
RT "Genomic map of a portion of the canine MHC class I histocompatibility
complex."; Submitted (SEP-2003) to the EMBL/GenBank/DBJ databases.
RN [4]
RP NUCLEOTIDE SEQUENCE [MRNA] OF 74-205.
RC STRAIN=Beagle; TISSUE=Blood;
RA Gilmore W.H., Carter S.D., Bennett M., Barnes A., Kelly D.F.;
RT "Expression of canine TNF, IL-1 and IL-6 mRNAs in peripheral blood
monocytes and cell lines."; Submitted (MAR-1996) to the EMBL/GenBank/DBJ databases.
RL Submitted (MAR-1996) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and
CC TNFRSF1B/TNFR. It is mainly secreted by macrophages and can
CC induce cell death of certain tumor cell lines. It is potent
CC pyrogen causing fever by direct action or by stimulation of
CC interleukin 1 secretion and is implicated in the induction of
CC cachexia. Under certain conditions it can stimulate cell
CC proliferation and induce cell differentiation.
CC -!- SUBUNIT: Homotrimer (By similarity).
CC -!- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an
CC extracellular soluble form (By similarity).
CC -!- PTM: The soluble form derives from the membrane form by
CC proteolytic processing (By similarity).
CC -!- PTM: The membrane form, but not the soluble form, is
CC phosphorylated on serine residues. Dephosphorylation of the
CC membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By
CC similarity).
CC -!- SIMILARITY: Belongs to the tumor necrosis factor family.
CC
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CC removed.
CC
CC EMBL; X94932; CAA64403.1; -; Genomic DNA.
CC EMBL; S74068; AAB32391.1; -; mRNA.
CC EMBL; AY423389; AAR27885.1; -; Genomic DNA.
CC EMBL; Z70046; CAA93908.1; -; mRNA.
CC HSSP; P01375; 4TSV.
CC SMR; P51742; 82-233.
CC Ensembl; ENSCARG0000000517; Canis familiaris.
CC InterPro; IPR006053; TNF abc.
CC InterPro; IPR002959; TNF alpha.
CC InterPro; IPR006052; TNF family.
CC InterPro; IPR003636; TNF subf.
CC PANTHER; PTHR11471:SF4; TNF_alpha; 1.
CC Pfam; PF00229; TNF; 1.
CC PRINTS; PR01234; TNCR0SISFCT.
CC PRINTS; PR01235; TNFALPHA.
CC ProDom; PD002012; TNF subf; 1.
CC SMART; SM00207; TNF; 1.

DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
FT CHAIN 1 233
FT CHAIN 77 233
FT TOPO_DOM 1 35
FT TRANSMEM 36 56
FT TOPO_DOM 57 233
FT SITE 76 77
FT MOD_RES 2 2
FT DISULFID 145 177
FT CONFLICT 59 60
FT CONFLICT 66 66
FT CONFLICT 74 74
FT CONFLICT 111 111
FT CONFLICT 116 116
FT CONFLICT 134 135
SQ SEQUENCE 233 AA; 25447 MW; 7B2588FBCB25340 CRC64;
Query Match 91.3%; Score 736; DB 1; Length 233;
Best Local Similarity 89.8%; Pred. No. 8.3e-67;
Matches 141; Conservative 7; Mismatches 9; Indels 0; Gaps 0;
QY 1 VRSSRTPTSDAPVAHVANPQAGQLWLNRRANALLANGVELRDNLVPSGLYLYS 60
DB 77 VKSSRTPTSDAPVAHVANPQAGQLWLNRRANALLANGVELTDNLVPSGLYLYS 136
QY 61 QVLFSGQCPSTHLLTHITISRIASVYQTRVNLISAIASPCQRETPGAEALPWTEPIYL 120
DB 137 QVLFPGQCPSTHLLTHITISRFASVYQTKVNLISAIASPCQRETPGTEAKPWTEPIYL 196
QY 131 GGVFQLETGDRLSAEINRPDYLDFAESGVYFGIIAL 157
DB 197 GGVFQLETGDRLSAEINRPDYLDFAESGVYFGIIAL 233

RESULT 11

ID TNFA_FELCA STANDARD; PRT; 233 AA.
AC P19101; QBHYMO;
DT 01-NOV-1990 (Rel. 16, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor
DE ligand superfamily member 2) (TNF-a) (Cachectin) [contains: Tumor
DE necrosis factor, membrane form; Tumor necrosis factor, soluble form].
GN Name=TNF; Synonyms=TNFA, TNFSF2;
OS Felis silvestris catus (Cat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Felidae;
OC Felinae; Felis.
OX NCBI_TaxID=9685;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Blood;
RX MEDLINE=91016860; PubMed=2216740;
RA McGraw R.A., Coffee B.W., Otto C.M., Drews R.T., Rawlings C.A.;
RT "Gene sequence of feline tumor necrosis factor alpha.";
RL Nucleic Acids Res. 18:5563-5563(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE [MRNA].
RC TISSUE=Bone marrow;
RA Daniel S.L., Brenner C.A., Legendre A.M., Solomon A., Rouse B.T.;
RT "Feline cytokines TNF alpha and IL-1 beta: PCR cloning and sequencing
RT of cDNA.";
RN [3]
RP NUCLEOTIDE SEQUENCE OF 95-185.
RA Susott E.E., Kollo W.A., Venta P.J., Ewart S.L.;
RT "Characterization of 8 feline type I markers.";
RL Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and

DR PROSITE: PS50049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 233 Tumor necrosis factor, membrane form (By similarity).
 FT CHAIN 77 233 Tumor necrosis factor, soluble form (By similarity).
 FT TOPO_DOM 1 32 Cytoplasmic (Potential).
 FT TRANSMEM 33 55 Signal-anchor for type II membrane protein (By similarity).
 FT TOPO_DOM 56 233 Extracellular (Potential).
 FT SITE 76 77 Cleavage (by ADAM17) (By similarity).
 FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
 FT DISULFID 145 177 By similarity.
 SQ SEQUENCE 233 AA; 25578 MW; 197FB066F744FCAD CRC64;
 Query Match 87.3%; Score 704; DB 1; Length 233;
 Best Local Similarity 87.3%; Pred. No. 1.6e-63;
 Matches 137; Conservative 6; Mismatches 14; Indels 0; Gaps 0;
 QY 1 VRSSRTSPDAPVAHVANPQAEQQLQWLNRRANALLANGVELRDNLVVPSEGLYLYS 60
 DB 77 VRSSGRIPSDKPAHVAVNPAQEQQLQWLNRRANALLANGVELRDNLVVPSEGLYLYS 136
 QY 61 QVLFSGQGPCSTHVLTHTSIRIAVSYQTRVNLSSAISPQORETPEGAEALPWYEPIYL 120
 DB 137 QVLFKGQGPCSTHVLTHTSIRIAVSYQAKVNLSSAISPQORETPEGAKTHPWYEPIYL 196
 QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
 DB 197 GGVFQLEKGDLSAEINRPDSDLSLAESGQVYFGIIAL 233
 RESULT 13
 TNFA_HORSE STANDARD; PRT; 234 AA.
 AC P29553; Q9TTJ3;
 DT 01-APR-1993 (Rel. 25, Created)
 DT 01-APR-1993 (Rel. 25, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Tumor necrosis factor ligand superfamily member 2) (TNF-a) (Cachectin) [Contains: Tumor necrosis factor, membrane form; Tumor necrosis factor, soluble form].
 GN Name=TNF; Synonyms=TNFA, TNFSF2;
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=92084125; PubMed=1748301; DOI=10.1016/0378-1119(91)90333-7;
 RA Su X., Morris D.D., McGraw R.A.;
 RT "Cloning and characterization of gene TNF alpha encoding equine tumor necrosis factor alpha.";
 RL Gene 107:319-321(1991).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RC STRAIN=Thoroughbred; TISSUE=Artery;
 RA Ishida N., Sato F., Hasegawa T.;
 RT "Molecular cloning of equine tumor necrosis factor-alpha mRNA.";
 RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin 1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation.
 CC -1- SUBUNIT: Homotrimer (By similarity).
 CC -1- SUBCELLULAR LOCATION: Type II membrane protein. Also exists as an extracellular soluble form (By similarity).
 CC -1- PTM: The soluble form derives from the membrane form by proteolytic processing (By similarity).
 CC -1- PTM: The membrane form, but not the soluble form, is

CC phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1 (By similarity).
 CC -1- SIMILARITY: Belongs to the tumor necrosis factor family.
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 CC -----
 CC EMBL; M64087; AAA30959.1; -; Genomic_DNA.
 DR EMBL; AB035735; BAA88349.1; -; mRNA.
 DR PIR; J01344; J01344.
 DR HSP; P01375; IASM.
 DR SMR; P29553; 83-234.
 DR InterPro; IPR006053; TNF abc.
 DR InterPro; IPR002959; TNF alpha.
 DR InterPro; IPR006052; TNF family.
 DR InterPro; IPR003636; TNF_subf.
 DR PANTHER; PTHR11471:SF4; TNF_alpha; 1.
 DR Pfam; PF00229; TNF; 1.
 DR PRINTS; PR01234; TNCRSISFCT.
 DR PRINTS; PR01235; TNFALPHA.
 DR ProDom; PD002012; TNF_subf; 1.
 DR SMART; SM00207; TNF; 1.
 DR PROSITE; PS00251; TNF_1; 1.
 DR PROSITE; PS0049; TNF_2; 1.
 KW Cytokine; Phosphorylation; Signal-anchor; Transmembrane.
 FT CHAIN 1 234 Tumor necrosis factor, membrane form.
 FT CHAIN 78 234 Tumor necrosis factor, soluble form.
 FT TOPO_DOM 1 35 Cytoplasmic (Potential).
 FT TRANSMEM 36 56 Signal-anchor for type II membrane protein (Potential).
 FT TOPO_DOM 57 234 Extracellular (Potential).
 FT SITE 77 78 Cleavage (by ADAM17) (By similarity).
 FT MOD_RES 2 2 Phosphoserine (by CK1) (By similarity).
 FT DISULFID 146 178 By similarity.
 FT CONFLICT 177 179 PCH -> LAN (in Ref. 2).
 SQ SEQUENCE 234 AA; 25469 MW; E79ACE91143DF373 CRC64;
 Query Match 86.2%; Score 695; DB 1; Length 234;
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 DB 138 QVLFKGQGPCSTHVLTHTSIRIAVSYQKVNLSAISPCHTESPEQAEKAPWYEPIYL 197
 QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
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 ID O97538 ACTVO PRELIMINARY; PRT; 149 AA.
 AC O97538
 DT 01-MAY-1999 (TrEMBLrel. 10, Created)
 DT 01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
 DE Tumor necrosis factor alpha (Fragment).
 GN Name=TNF-alpha;
 OS Aotus vociferans (Spix's owl monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
 OC Aotinae; Aotus.
 OX NCBI_TaxID=57176;
 RN [1]

RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF014508; AAD01534.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; Q97538; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.
DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF alpha.
DR InterPro; IPR006052; TNF family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_subf; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
DR NON_TER 1
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SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 86.0%; Score 693; DB 2; Length 149;
Best Local Similarity 89.3%; Pred. No. 1.2e-62;
Matches 133; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

QY 8 PSDAPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYSQVLPFGQ 67
DB 1 PSDKPVAVHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYSQVLPFGQ 60

QY 68 GCPSTHVLTHTSIRIAVSQTRVNLLSAISPQRETPEGALPWPYPIYLGGVFQLE 127
DB 61 GCPSTFMLLTHSIRIAVSQAKVNLLSAISPQRETPEGALPWPYPIYLGGVFQLE 120

QY 128 TGDRLSAEINRPDYLDPAESGVYFGIIA 156
DB 121 KGDRLSAEINLPDYLDAESGVYFGIIA 149

Search completed: May 5, 2006, 11:26:00
Job time : 54.5 secs

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AC Q9TTG8;
DT 01-MAY-2000 (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Tumor necrosis factor alpha (fragment).
GN Names=TNF-alpha;
OS Aotus nigriceps (Black-headed owl monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Aotinae; Aotus.
OX NCBI_TaxID=571175;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22354194; PubMed=12466897; DOI=10.1007/s00251-002-0512-2;
RA Hernandez E.C., Suarez C.F., Mendez J.A., Echeverry S.J.,
RA Murillo L.A., Patarroyo M.E.;
RT "Identification, cloning, and sequencing of different cytokine genes
in four species of owl monkey.";
RL Immunogenetics 54:645-653(2002).
DR EMBL; AF097328; AAF21303.1; -; mRNA.
DR HSSP; P01375; 4TSV.
DR SMR; Q9TTG8; 1-149.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005164; F:tumor necrosis factor receptor binding; IEA.
DR GO; GO:0006955; P:immune response; IEA.

DR InterPro; IPR006053; TNF abc.
DR InterPro; IPR002959; TNF alpha.
DR InterPro; IPR006052; TNF family.
DR InterPro; IPR003636; TNF_subf.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_subf; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
DR NON_TER 1
FT NON_TER 149 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 86.0%; Score 693; DB 2; Length 149;
Best Local Similarity 89.3%; Pred. No. 1.2e-62;
Matches 133; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

QY 8 PSDAPVAHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYSQVLPFGQ 67
DB 1 PSDKPVAVHVAVNPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLYSQVLPFGQ 60

QY 68 GCPSTHVLTHTSIRIAVSQTRVNLLSAISPQRETPEGALPWPYPIYLGGVFQLE 127
DB 61 GCPSTFMLLTHSIRIAVSQAKVNLLSAISPQRETPEGALPWPYPIYLGGVFQLE 120

QY 128 TGDRLSAEINRPDYLDPAESGVYFGIIA 156
DB 121 KGDRLSAEINLPDYLDAESGVYFGIIA 149

Search completed: May 5, 2006, 11:26:00
Job time : 54.5 secs

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Copyright (c) 1993 - 2006 Bioceleration Ltd.
OM protein - protein search, using sw model
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(without alignments)
851.153 Million cell updates/sec
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Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5
Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:*
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4: /cgn2_6/ptodata/1/iaa/PCTUS COMB.pep.*
5: /cgn2_6/ptodata/1/iaa/RE COMB.pep.*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	777	96.4	157	1	US-07-794-400-1
2	777	96.4	157	1	US-08-041-648-2
3	777	96.4	157	1	US-08-107-235-1
4	777	96.4	157	1	US-08-217-529-2
5	777	96.4	157	1	US-08-318-193-86
6	777	96.4	157	1	US-08-397-470-1
7	777	96.4	157	1	US-08-192-102-1
8	777	96.4	157	1	US-08-324-799-1
9	777	96.4	157	1	US-08-538-875-1
10	777	96.4	157	1	US-08-394-600B-17
11	777	96.4	157	1	US-08-500-860A-35
12	777	96.4	157	1	US-08-192-861A-1
13	777	96.4	157	1	US-08-600-783-5
14	777	96.4	157	2	US-08-584-031-13
15	777	96.4	157	2	US-08-714-960B-1
16	777	96.4	157	2	US-09-133-119-1
17	777	96.4	157	2	US-08-192-093A-1
18	777	96.4	157	2	US-09-588-784-1
19	777	96.4	157	2	US-09-496-118B-7
20	777	96.4	157	2	US-08-395-456C-17
21	777	96.4	157	2	US-08-487-453A-17
22	777	96.4	157	2	US-09-582-450-13
23	777	96.4	157	2	US-09-934-465-13
24	777	96.4	157	2	US-09-756-301B-1
25	777	96.4	157	2	US-09-756-398B-1
26	777	96.4	157	4	PCT-US92-02190-1
27	777	96.4	157	4	PCT-US93-02475-1

28	777	96.4	157	4	PCT-US95-02513-17	Sequence 17, Appl
29	777	96.4	157	6	5180811-1	Patent No. 5180811
30	777	96.4	158	2	US-09-645-415A-4	Sequence 4, Appl
31	777	96.4	177	1	US-08-394-600B-21	Sequence 21, Appl
32	777	96.4	177	2	US-08-395-456C-21	Sequence 21, Appl
33	777	96.4	177	2	US-08-487-453A-21	Sequence 21, Appl
34	777	96.4	177	4	PCT-US95-02513-21	Sequence 21, Appl
35	777	96.4	180	2	US-09-645-415A-8	Sequence 8, Appl
36	777	96.4	193	1	US-08-889-909A-3	Sequence 3, Appl
37	777	96.4	193	2	US-09-156-163A-3	Sequence 3, Appl
38	777	96.4	193	2	US-09-982-308B-3	Sequence 3, Appl
39	777	96.4	233	1	US-08-323-445A-10	Sequence 10, Appl
40	777	96.4	233	1	US-08-515-903A-10	Sequence 10, Appl
41	777	96.4	233	1	US-08-912-227-3	Sequence 3, Appl
42	777	96.4	233	1	US-08-230-428B-2	Sequence 2, Appl
43	777	96.4	233	2	US-08-883-086-6	Sequence 6, Appl
44	777	96.4	233	2	US-08-880-342-37	Sequence 37, Appl
45	777	96.4	233	2	US-09-589-287B-3	Sequence 3, Appl

ALIGNMENTS

RESULT 1
US-07-794-400-1
; Sequence 1, Application US/07794400
; Patent No. 5422104
; GENERAL INFORMATION:
; APPLICANT: Fiers, W.
; APPLICANT: Tavernier, J.
; APPLICANT: Van Ostade, X.
; TITLE OF INVENTION: TNF-Mutains
; NUMBER OF SEQUENCES: 24
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM: disk
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/794,400
; FILING DATE: 19911120
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
US-07-794-400-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db	1	VFS	SRT	PSD	K	P	V	H	V	N	P	Q	E	Q	L	N	R	R	A	L	L	A	N	G	V	E	L	R	D	N	O	L	V	P	S	E	G	L	I	Y	S	60													
Qy	61	Q	V	L	F	S	G	Q	C	P	S	T	H	V	L	L	T	T	I	S	R	I	A	V	S	Y	Q	T	R	V	N	L	S	A	I	S	A	C	P	O	R	E	T	P	G	E	A	L	P	W	Y	P	I	L	120
Db	61	Q	V	L	F	S	G	Q	C	P	S	T	H	V	L	L	T	T	I	S	R	I	A	V	S	Y	Q	T	R	V	N	L	S	A	I	S	A	C	P	O	R	E	T	P	G	E	A	L	P	W	Y	P	I	L	120
Qy	121	G	V	F	Q	L	E	T	D	R	L	S	A	E	I	N	R	P	D	V	L	D	F	A	E	S	Q	V	T	F	G	I	A	L	157																				
Db	121	G	V	F	Q	L	E	K	D	R	L	S	A	E	I	N	R	P	D	V	L	D	F	A	E	S	Q	V	T	F	G	I	A	L	157																				

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RESULT 2
US-08-041-648-2
; Sequence 2, Application US/08041648
; Patent No. 5486463
; GENERAL INFORMATION:
; APPLICANT: Lesslauer, Werner
; APPLICANT: L tscher, Hansruedi
; APPLICANT: St ber, Dietrich
; TITLE OF INVENTION: TNF-MUTAINS
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
; STREET: 340 Kingeland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: U.S.A.
; ZIP: 07110-1199

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	Query Match	96.4%	Score 777;	DB 1;	Length 157;	
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Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

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RESULT 3
US-08-107-235-1
; Sequence 1, Application US/08107235
; Patent No. 5587457
; GENERAL INFORMATION:
; APPLICANT: Rathjen, Deborah A
; APPLICANT: Ferrante, Antonio
; APPLICANT: Widmer, Fred
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Allegretti & Witcoff, Ltd.
; STREET: 10 S. Wacker Dr.
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606

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Query Match	96.4%	Score 777;	DB 1;	Length 157;
Best Local Similarity	96.2%;	Pred. No. 3.9e-74;		
Matches 151;	Conservative	1;	Mismatches 5;	Indels 0;
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Db	1	VRSSRTPSDKPVAHVAVNPOAEQQLQWLNRRNALLANGVELRDNLVVPSEGLYLYS	60
Qy	61	QVLFSGQCPSTHYLLTHTTSRIAIVSQTRVNLLSAISPQRETPEGABALPWYSPYVL	120
Db	61	QVLPKQGCPSTHYLLTHTTSRIAIVSQTRVNLLSAISKPCQRETPEGAEAKPWYSPYVL	120
Qy	121	GVGFQLETGDRLSAEINRPDVLDFAESGVQVVFGLAL	157
Db	121	GVGFQLEWDRLSAEINRPDVLDFAESGVQVVFGLAL	157

RESULT 4
US-08-217-529-2 ; Sequence 2, Application US/08217529
; Patent No. 5597899
; GENERAL INFORMATION:

APPLICANT: Banner, David
APPLICANT: Lesslauer, Werner
APPLICANT: Letscher, Hansreudt
APPLICANT: Stuber, Dietrich
TITLE OF INVENTION: Tumor Necrosis Factor Muteins
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: U.S.
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/217,529
FILING DATE: 24-MAR-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 93810224.1
FILING DATE: 29-MAR-1993
ATTORNEY/AGENT INFORMATION:
NAME: Roseman, Catherine R
REGISTRATION NUMBER: 34240
REFERENCE/DOCKET NUMBER: 4105/155
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-6208
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-217-529-2

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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QY 61 QVLFSGGCGPSTHVLTHHTISRIAVSYQTRVNLISAIASPCQRETPEGAEALPWYBPIYL 120
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DB 121 GGVFQLEKGRLSAEINRPDYLDFAESGGVYFGIALL 157

RESULT 5
US-08-318-193-86
Sequence 86, Application US/08318193
Patent No. 5641663
GENERAL INFORMATION:
APPLICANT: GARVIN, Robert T.
APPLICANT: MALEK, Lawrence T.
TITLE OF INVENTION: AN EXPRESSION SYSTEM FOR THE SECRETION
OF BIOACTIVE HUMAN GRANULOCYTE MACROPHAGE COLONY
STIMULATING FACTOR (GM-CSF) AND OTHER HETEROLOGOUS
PROTEINS FROM STREPTOMYCES
TITLE OF INVENTION: PROTEINS FROM STREPTOMYCES
NUMBER OF SEQUENCES: 91
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500
CITY: Alexandria

STATE: Virginia
COUNTRY: USA
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/318,193
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,314
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 18740/116 CACO
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-9300
TELEFAX: (703) 683-4109
TELEX: 899149
INFORMATION FOR SEQ ID NO: 86:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-318-193-86

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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RESULT 6
US-08-397-470-1
Sequence 1, Application US/08397470
Patent No. 5652353
GENERAL INFORMATION:
APPLICANT: Fiers, W.
APPLICANT: Tavernier, J.
APPLICANT: Van Ostade, X.
TITLE OF INVENTION: TNF-Mutins
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/397,470

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; FILING DATE: 01-MAR-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/794,400
; FILING DATE: 20-NOV-1991
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
;
US-08-397-470-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPAHVAVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGGQCPSTHLLTHTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 120
Db 61 QVLFKGQCPSTHLLTHTISRIAVSYQTKVNLLSAISKPCQRETPEGAEAKPWYEPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIAL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIAL 157

RESULT 7
US-08-192-102-1
; Sequence 1, Application US/08192102
; Patent No. 5656272
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND ASSAYS EMPLOYING
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/192,102
; FILING DATE: 04-FEB-1994
; CLASSIFICATION: 424
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/192,093
; FILING DATE: 04-FEB-1994
; APPLICATION NUMBER: US 08/013,413
; FILING DATE: 02-FEB-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/010,406
; FILING DATE: 29-JAN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/943,852
; FILING DATE: 11-SEP-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,606
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/670,827
; FILING DATE: 18-MAR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Brook, David E.
; REGISTRATION NUMBER: 22,592
; REFERENCE/DOCKET NUMBER: NTU93-01M3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 861-6240
; TELEFAX: (617) 861-9540
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
;
US-08-192-102-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPAHVAVANPQAEQQLWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGGQCPSTHLLTHTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 120
Db 61 QVLFKGQCPSTHLLTHTISRIAVSYQTKVNLLSAISKPCQRETPEGAEAKPWYEPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIAL 157
Db 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIAL 157

RESULT 8
US-08-324-799-1
; Sequence 1, Application US/08324799
; Patent No. 5698195
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND PEPTIDES
; TITLE OF INVENTION: OF HUMAN TUMOR NECROSIS FACTOR
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
; CITY: Lexington
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02173
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/324,799
; FILING DATE: 18-OCT-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/192,093
; FILING DATE: 04-FEB-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/192,102
; FILING DATE: 04-FEB-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/192,861
; FILING DATE: 04-FEB-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/013,413
; FILING DATE: 02-FEB-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/010,406
; FILING DATE: 29-JAN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/943,852
; FILING DATE: 11-SEP-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,606
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/670,827
; FILING DATE: 18-MAR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Brook, David E.
; REGISTRATION NUMBER: 22,592
; REFERENCE/DOCKET NUMBER: NYU93-01M4
; TELEPHONE: (617) 861-6240
; TELEFAX: (617) 861-9540
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-324-799-1

Query Match          96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPVAHVVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTRVNLLSAISPQORETPEGAEALPWYPIYL 120
DB 61 QVLFKGGCPSHTVLLTHTISRIASVYQTKVNLLSAISPQORETPEGAEALPWYPIYL 120
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 9
US-08-538-875-1
; Sequence 1, Application US/08538875
; Patent No. 5773582
; GENERAL INFORMATION:
; APPLICANT: Shin, Hang-Cheol
; APPLICANT: Shin, Nam-Kyu
; APPLICANT: Lee, Inkyung
; APPLICANT: Kang, Sungzong
; TITLE OF INVENTION: TUMOR NECROSIS FACTOR MUTAINS
; NUMBER OF SEQUENCES: 73
; CORRESPONDENCE ADDRESS:

```

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; ADDRESSEE: Shin, Hang-Cheol
; STREET: Jukong Gochung Apt. 1014-806, Haan-dong
; CITY: Kwangmyung-ehi
; STATE: Kyungki-do
; COUNTRY: Republic of Korea
; ZIP: 423-060
; ADDRESSEE: Shin, Nam-Kyu
; STREET: #181-404 Sadang-4-dong, Dongjak-ku
; CITY: Seoul
; STATE:
; COUNTRY: Republic of Korea
; ZIP: 156-094
; ADDRESSEE: Lee, Inkyung
; STREET: 11/2, #302-39 Juan-4-dong, Nam-ku
; CITY: Incheon
; STATE:
; COUNTRY: Republic of Korea
; ZIP: 402-204
; ADDRESSEE: Kang, Sungzong
; STREET: #84-4 Daeshin-dong, Seodaemun-ku
; CITY: Seoul
; STATE:
; COUNTRY: Republic of Korea
; ZIP: 120-160
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette 3.5inch 2.0Mb storage
; COMPUTER: IBM PC/AT
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/538,875
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/193,336
; FILING DATE:
; APPLICATION NUMBER: KR 93-1751
; FILING DATE: 9-FEB-1993
; ATTORNEY/AGENT INFORMATION:
; NAME:
; REGISTRATION NUMBER:
; REFERENCE/DOCKET NUMBER:
; TELECOMMUNICATION INFORMATION:
; TELEPHONE:
; TELEFAX:
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-538-875-1

Query Match          96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
DB 1 VRSSRTPSDKPVAHVVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
QY 61 QVLFSGQGCPSHTVLLTHTISRIASVYQTRVNLLSAISPQORETPEGAEALPWYPIYL 120
DB 61 QVLFKGGCPSHTVLLTHTISRIASVYQTKVNLLSAISPQORETPEGAEALPWYPIYL 120
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL 157

RESULT 10
US-08-394-600B-17

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; Sequence 17, Application US/09394600B
; Patent No. 5843693
; GENERAL INFORMATION:
; APPLICANT: Halenbeck, Robert F.
; APPLICANT: Jewell, David A.
; APPLICANT: Kotha, Kirston E.
; APPLICANT: Kriegler, Michael
; APPLICANT: Perez, Carl
; TITLE OF INVENTION: Compositions for the Inhibition of
; TITLE OF INVENTION: Protein Hormone Formation and Uses Thereof
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street; 34th Floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/394,600B
; FILING DATE: 02/27/95
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Donald J. Pochopien
; REGISTRATION NUMBER: 32,167
; REFERENCE/DOCKET NUMBER: 820.005/11850US05
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX:
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-394-600B-17

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLVWPSGGLYLIYS 60
Db 1 VRSSRTPSDKPAHVANPQAEQQLWLNRRANALLANGVELRDNLVWPSGGLYLIYS 60
Qy 61 QVLPSGGCSTHVLTHTSIRIAVSQYTKVNLISAIASPCQRETPGEAKLPWYPIYL 120
Db 61 QVLPSGGCSTHVLTHTSIRIAVSQYTKVNLISAIASPCQRETPGEAKLPWYPIYL 120
Qy 121 GGVFQLETKGDRLSAENRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFQLETKGDRLSAENRPDYLDFAESGQVYFGIALL 157

RESULT 11
US-08-500-860A-35
; Sequence 35, Application US/08500860A
; Patent No. 5891679
; GENERAL INFORMATION:
; APPLICANT: LUCAS, RUDOLPH
; APPLICANT: DE BAETSELIER, PATRICK
; APPLICANT: FRANSEN, LUCIE
; APPLICANT: SABLON, ERWIN
; TITLE OF INVENTION: TNF-MUTAINS, A PROCESS FOR PREPARING THEM AND
; TITLE OF INVENTION: THEIR USE AS ACTIVE SUBSTANCES IN PHARMACEUTICAL COMPOSITIONS
; NUMBER OF SEQUENCES: 36
; CORRESPONDENCE ADDRESS:

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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/192,861A
FILING DATE: 04-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NYU93-01M2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (781) 861-6240
TELEFAX: (781) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-192-861A-1

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVAVNPQAGQLQWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAVHVAVNPQAGQLQWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTHITISRIASVYQTRVNLISAIASPCQRETPEGALPWYPIYL 120
DB 61 QVLFKGGCGPSTHVLTHITISRIASVYQTRVNLISAIASPCQRETPEGALPWYPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 13
US-08-600-783-5
Sequence 5, Application US/08600783
Patent No. 5962267
GENERAL INFORMATION:
APPLICANT: SHIN, Hang Cheol
APPLICANT: CHANG, Seung Gu
APPLICANT: KIM, Dae Young
APPLICANT: KIM, Chong Suh
TITLE OF INVENTION: Proinsulin Derivative and Process
TITLE OF INVENTION: For Producing Human Insulin
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: SHIN, Hang Cheol
STREET: Seangma-Hanshin Apt. 102-1206,
STREET: #245 Cholsan-dong
CITY: Kwangmyung-shi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 423-030
ADDRESSEE: CHANG, Seung Gu

STREET: Hyundai Apt. 71-203, Apxujong-dong,
STREET: Kangnam-ku
CITY: Seoul
STATE: Seoul
COUNTRY: Republic of Korea
ZIP: 135-110
ADDRESSEE: KIM, Dae Young
STREET: Sosa Jukong Apt. 108-202, Sosa Bon-dong,
STREET: Sosa-ku
CITY: Bucheon-ehi
STATE: Kyungki-do
COUNTRY: Republic of Korea
ZIP: 422-230
ADDRESSEE: KIM, Chong Suh
STREET: Garden Heights Apt. 202-801, #100,
STREET: Hwangkeum-dong, Soosung-ku
CITY: Taegu
STATE: Taegu
COUNTRY: Republic of Korea
ZIP: 706-040
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk, 3.5 inch, 1.44MB storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/600,783
FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: KR 95-2751
FILING DATE: 15-FEB-1995
ATTORNEY/AGENT INFORMATION:
NAME: Shahan Islam
REGISTRATION NUMBER: 32,507
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 278-1000
TELEFAX: (212) 953-7249
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-600-783-5

Query Match 96.4%; Score 777; DB 1; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVAVNPQAGQLQWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTPSDKPVAVHVAVNPQAGQLQWLNRRNALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCGPSTHVLTHITISRIASVYQTRVNLISAIASPCQRETPEGALPWYPIYL 120
DB 61 QVLFKGGCGPSTHVLTHITISRIASVYQTRVNLISAIASPCQRETPEGALPWYPIYL 120
QY 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 14
US-08-584-031-13
Sequence 13, Application US/08584031A
Patent No. 6030945
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi J.
TITLE OF INVENTION: APO-2 LIGAND
FILE REFERENCE: 11669.22US03

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; CURRENT APPLICATION NUMBER: US/08/584,031A
; CURRENT FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-08-584-031-13

Query Match          96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
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Db 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 61 QVLFSGQGPCSTHVLTHTTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWYEPIYL 120
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Db 61 QVLFKGQGPCSTHVLTHTTISRIAVSYQTKVNLLSAISPCCORETPEGAEALPWYEPIYL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIALL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

; LENGTH: 157 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: not relevant
; MOLECULE TYPE: protein
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..157
; OTHER INFORMATION: /note= "Human TNF"
; US-08-714-960B-1

Query Match          96.4%; Score 777; DB 2; Length 157;
Best Local Similarity 96.2%; Pred. No. 3.9e-74;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 1 VRSSRTPSDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 61 QVLFSGQGPCSTHVLTHTTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWYEPIYL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 61 QVLFKGQGPCSTHVLTHTTISRIAVSYQTKVNLLSAISPCCORETPEGAEALPWYEPIYL 120
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGVYFGIALL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGVYFGIALL 157
   |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
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Job time : 16.25 secs

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RESULT 15
US-08-714-960B-1
; Sequence 1, Application US/08714960B
; Patent No. 6121237
; GENERAL INFORMATION:
; APPLICANT: RATHJEN, Deborah A
; APPLICANT: FERRANTE, Antonio
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BANNER & WITCOFF, LTD.
; STREET: 10 S. Wacker Drive, Suite 3000
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 1.44 Mb storage diskette, 3.50 inch
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: IBM compatible PC/MS-DOS
; SOFTWARE: WordPerfect version 6.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/714,960B
; FILING DATE: 17-SEP-1996
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: AU RJ9065
; FILING DATE: 12-MAR-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/AU91/00086
; FILING DATE: 12-MAR-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/930,415
; FILING DATE: 09-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/107,235
; FILING DATE: 16-AUG-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Resis, Robert H.
; REGISTRATION NUMBER: 32,168
; REFERENCE/DOCKET NUMBER: 92,622-B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (312) 715-1000
; TELEFAX: (312) 715-1234
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
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OM protein - protein search, using sw model
Run on: May 5, 2006, 11:26:23 ; Search time 45.5 Seconds
(without alignments)
1441.741 Million cell updates/sec

Title: US-10-668-178-16
Perfect score: 806
Sequence: 1 VRSSRTPSDAPVAHVANP.....RPDYLDFAESGGVYFGIALL 157

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues
Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA Main:
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.psp:
2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.psp:
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.psp:
4: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.psp:
5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.psp:
6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.psp:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	806	100.0	157	5	US-10-668-178-15 Sequence 15, Appl
2	806	100.0	157	5	US-10-668-178-16 Sequence 16, Appl
3	778	96.5	157	4	US-10-262-630-13 Sequence 13, Appl
4	778	96.5	157	4	US-10-354-985-2 Sequence 2, Appl
5	778	96.5	157	5	US-10-668-178-2 Sequence 2, Appl
6	777	96.4	157	3	US-09-756-301A-1 Sequence 1, Appl
7	777	96.4	157	3	US-09-927-703-1 Sequence 1, Appl
8	777	96.4	157	3	US-09-854-280-19 Sequence 19, Appl
9	777	96.4	157	3	US-09-934-465-13 Sequence 13, Appl
10	777	96.4	157	3	US-09-766-535A-1 Sequence 1, Appl
11	777	96.4	157	3	US-09-854-208-19 Sequence 19, Appl
12	777	96.4	157	3	US-09-756-161A-1 Sequence 1, Appl
13	777	96.4	157	3	US-09-903-327A-7 Sequence 7, Appl
14	777	96.4	157	3	US-09-756-398B-1 Sequence 1, Appl
15	777	96.4	157	3	US-09-897-724-1 Sequence 1, Appl
16	777	96.4	157	4	US-10-010-229-1 Sequence 1, Appl
17	777	96.4	157	4	US-10-043-450-1 Sequence 1, Appl
18	777	96.4	157	4	US-10-044-534-1 Sequence 1, Appl
19	777	96.4	157	4	US-10-099-007A-1 Sequence 1, Appl
20	777	96.4	157	4	US-10-043-432-1 Sequence 1, Appl
21	777	96.4	157	4	US-10-119-621-1 Sequence 1, Appl
22	777	96.4	157	4	US-10-208-145-1 Sequence 1, Appl
23	777	96.4	157	4	US-10-262-630-9 Sequence 9, Appl
24	777	96.4	157	4	US-10-305-347A-9 Sequence 9, Appl
25	777	96.4	157	4	US-10-198-845-1 Sequence 1, Appl
26	777	96.4	157	4	US-10-237-488-1 Sequence 1, Appl
27	777	96.4	157	4	US-10-170-812-7 Sequence 7, Appl

28	777	96.4	157	4	US-10-187-121-1	Sequence 1, Appl
29	777	96.4	157	4	US-10-176-460-1	Sequence 1, Appl
30	777	96.4	157	4	US-10-186-559-1	Sequence 1, Appl
31	777	96.4	157	4	US-10-371-961-1	Sequence 1, Appl
32	777	96.4	157	4	US-10-200-795-1	Sequence 1, Appl
33	777	96.4	157	4	US-10-319-011-1	Sequence 1, Appl
34	777	96.4	157	4	US-10-371-443-1	Sequence 1, Appl
35	777	96.4	157	4	US-10-379-866-1	Sequence 1, Appl
36	777	96.4	157	4	US-10-371-962-1	Sequence 1, Appl
37	777	96.4	157	4	US-10-354-985-1	Sequence 1, Appl
38	777	96.4	157	4	US-10-397-786A-1	Sequence 1, Appl
39	777	96.4	157	4	US-10-665-971-1	Sequence 1, Appl
40	777	96.4	157	4	US-10-637-759-1	Sequence 1, Appl
41	777	96.4	157	4	US-10-327-619-1	Sequence 1, Appl
42	777	96.4	157	4	US-10-774-118-1	Sequence 1, Appl
43	777	96.4	157	4	US-10-394-471B-17	Sequence 17, Appl
44	777	96.4	157	5	US-10-861-685-13	Sequence 13, Appl
45	777	96.4	157	5	US-10-668-178-1	Sequence 1, Appl

ALIGNMENTS

RESULT 1
US-10-668-178-15
; Sequence 15, Application US/10668178
; Publication No. US20050013795A1
; GENERAL INFORMATION:
; APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
; APPLICANT: MAYUMI, Tadanori
; APPLICANT: TSUTSUMI, Yasuo
; APPLICANT: NAKAGAWA, Shinsaku
; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMIZA
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 15
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Synthetic Construct
US-10-668-178-15

Query Match	100.0%;	Score	806;	DB	5;	Length	157;		
Best Local Similarity	100.0%;	Pred. No.	6.3e-82;	Mismatches	0;	Indels	0;	Gaps	0;
Matches	157;	Conservative	0;						
Qy	1	VRSSRTPSDAPVAHVAVNPPQAEGQLNRRNALLANGVELRDNLQVVPSEGLYLIYS	60						
Db	1	VRSSRTPSDAPVAHVAVNPPQAEGQLNRRNALLANGVELRDNLQVVPSEGLYLIYS	60						
Qy	61	QVLFSGGCPSTHVLLTHTISRIASVQTRVNLLSAISPCORETPGAEALPWYEPYIL	120						
Db	61	QVLFSGGCPSTHVLLTHTISRIASVQTRVNLLSAISPCORETPGAEALPWYEPYIL	120						
Qy	121	GGVFOLETGRLSAEINRPDYLDFAESGGVYFGIALL	157						
Db	121	GGVFOLETGRLSAEINRPDYLDFAESGGVYFGIALL	157						

RESULT 2
US-10-668-178-16
; Sequence 16, Application US/10668178
; Publication No. US20050013795A1
; GENERAL INFORMATION:

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; APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
; APPLICANT: MAYUMI, Tadanori
; APPLICANT: TSUTSUMI, Yasuo
; APPLICANT: NAKAGAWA, Shinako
; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMI2A
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: Patentin version 3.3
; SEQ ID NO 16
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: synthetic (Variant protein of human tumor necrosis factor)
US-10-668-178-16
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Query Match 100.0%; Score 806; DB 5; Length 157;
Best Local Similarity 100.0%; Pred. No. 6.3e-82; Indels 0; Gaps 0;
Matches 157; Conservative 0; Mismatches 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTTISRIAVSYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
Db 61 QVLFSGQGCPSPTHVLLTHTTISRIAVSYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
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RESULT 3
US-10-262-630-13
; Sequence 13, Application US/10262630
; Publication No. US20030138401A1
; GENERAL INFORMATION:
; APPLICANT: Dahiyat, Basail I.
; APPLICANT: Desjarlais, John R.
; APPLICANT: Filikov, Anton
; APPLICANT: Muchhal, Unesh
; APPLICANT: Tansey, Malu Lourdas G.
; APPLICANT: Zalevsky, Jonathan
; TITLE OF INVENTION: PROTEIN BASED TNF-ALPHA VARIANTS FOR THE TREATMENT OF TNF-ALPHA
; FILE REFERENCE: A-68990-4/RFT/RMS/RMK
; CURRENT APPLICATION NUMBER: US/10/262,630
; CURRENT FILING DATE: 2003-01-27
; PRIOR APPLICATION NUMBER: US 60/186,427
; PRIOR FILING DATE: 2000-03-02
; PRIOR APPLICATION NUMBER: US 09/945,150
; PRIOR FILING DATE: 2001-08-31
; PRIOR APPLICATION NUMBER: US 09/798,789
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: US 09/981,289
; PRIOR FILING DATE: 2001-10-15
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic
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; NAME/KEY: MISC FEATURE
; LOCATION: (112)..(112)
; OTHER INFORMATION: "Xaa" at position 112 can be Asp or Glu
US-10-262-630-13

Query Match 96.5%; Score 778; DB 4; Length 157;
Best Local Similarity 96.2%; Pred. No. 8.7e-79;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
Db 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYLIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTTISRIAVSYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
Db 61 QVLFSGQGCPSPTHVLLTHTTISRIAVSYQTRVNLISAIASPCORETPEGAEALPWYEPIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
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RESULT 4
US-10-354-985-2
; Sequence 2, Application US/10354985
; Publication No. US20040001802A1
; GENERAL INFORMATION:
; APPLICANT: MAYUMI, Tadanori et al.
; TITLE OF INVENTION: PHYSIOLOGICALLY ACTIVE COMPLEX
; FILE REFERENCE: MAYUMI-2
; CURRENT APPLICATION NUMBER: US/10/354,985
; CURRENT FILING DATE: 2003-01-31
; PRIOR APPLICATION NUMBER: JP 083509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 1185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 2
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Variant protein of human tumor necrosis factor
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (11)..(11)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (65)..(65)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (90)..(90)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (98)..(98)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (112)..(112)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (128)..(128)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
US-10-354-985-2
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Query Match 96.5%; Score 778; DB 4; Length 157;
Best Local Similarity 96.2%; Pred. No. 8.7e-79;
Matches 151; Conservative 0; Mismatches 6; Indels 0; Gaps 0;
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	Qy	1 VRSSRTPSDAPVAHVANPQAEGQLWLNRRNALLANGVELRDNLVVPSEGLYLYS 60
	Dd	1 VRSSTTPSDX PVAHVANPQAEGQLWLNRRNALLANGVELRDNLVVPSEGLYLYS 60
	Qy	61 QVLFSGQCPCSHVLLTHTISRIASVSYOTRVNLLSAIASCORETPPEGABALPWYPPIYL 120
	Dd	61 QVLFXGCCPCSHVLLTHTISRIASVSYQTVNLLSAIXSPCORETPPEGAEXPWPYEPIL 120
	Qy	121 GGVOLETGDRLLSAENRPDYLDFAESGVVFIIAL 157
	Dd	121 GGVFOLEXGRLLSAENRPDYLDFAESGVVFIIAL 157

RESULT 5
US-10-668-178-2
; Sequence 2, Application US/10668178
; Publication No. US20050013795A1
; GENERAL INFORMATION:
; APPLICANT: KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
; APPLICANT: MAYUMI, Tadanori
; APPLICANT: TSUTSUMI, Yasuo
; APPLICANT: NAKAGAWA, Shinsaku
; APPLICANT: IKEGAMI, Hakuo
; TITLE OF INVENTION: Biologically-active conjugate
; FILE REFERENCE: MAYUMI2A
; CURRENT APPLICATION NUMBER: US/10/668,178
; CURRENT FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: JP 83509/2002
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER: JP 185387/2002
; PRIOR FILING DATE: 2002-06-26
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 2
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: synthetic (Variant protein of human tumor necrosis factor)
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (11)..(11)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (65)..(65)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (90)..(90)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (98)..(98)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (112)..(112)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (128)..(128)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
US-10-668-178-2

Qy	61	QVLPSGGGCPSTHLLTHTTSRIASVQTRVNLISATSPCORETPEGEALPWYEPIYL	120
Db	61	QVLFXGGGCPSTHLLTHTTSRIASVQTXVNLISATSPCORETPEGEAXPWYEPIYL	120
Qy	121	GGVFQLTGTGRLSAEINRPDYLDPAESGGVFGIHAL	157
Db	121	GGVFQLTGTGRLSAEINRPDYLDPAESGGVFGIHAL	157

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RESULT 6
US-09-7556-301A-1
; Sequence 1, Application US/09756301A
; Patent No. US2001002749A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junning
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNP Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975.1005-008
; CURRENT APPLICATION NUMBER: US/09/7556,301A
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-7556-301A-1

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Query Match 96.5%; Score 778; DB 5; Length 157;
Best Local Similarity 96.2%; Pred. No. 8.7e-79;
Matches 151; Conservative 0; Mismatches 6; Indels 0; Gaps 0

Qy 1 VRSSRTPSDAPVAHVANPQEGOLQWLNRRANALLANGVELRDNLVWPSEGLYLIYS 60
Db 1 VRSSRTPSDAPVAHVANPQEGOLQWLNRRANALLANGVELRDNLVWPSEGLYLIYS 60

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RESULT 7
US-09-927-703-1
; Sequence 1, Application US/09927703
; Patent No. US20020022720A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; FILE REFERENCE: 0975.1005-013
; CURRENT APPLICATION NUMBER: US/09/927,703
; CURRENT FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-927-703-1

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.le-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
Db 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWYEPYIYL 120
Db 61 QVLFKGGQGCPSPTHVLLTHTISRIAVSYQTKVNLLSAISPCCORETPEGAEALPWYEPYIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 8
US-09-854-280-19
; Sequence 19, Application US/09854280
; Patent No. US20020052027A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Goddard, Audrey

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.le-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
Db 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWYEPYIYL 120
Db 61 QVLFKGGQGCPSPTHVLLTHTISRIAVSYQTKVNLLSAISPCCORETPEGAEALPWYEPYIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 9
US-09-934-465-13
; Sequence 13, Application US/09934465
; Patent No. US2002010223A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi J.
; TITLE OF INVENTION: APO-2 LIGAND
; FILE REFERENCE: 11669.22US03
; CURRENT APPLICATION NUMBER: US/09/934,465
; CURRENT FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 08/584,031
; PRIOR FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-934-465-13

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.le-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
Db 1 VRSSRTPSDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLVVPSEGLYIYS 60
QY 61 QVLFSGQGCPSPTHVLLTHTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWYEPYIYL 120
Db 61 QVLFKGGQGCPSPTHVLLTHTISRIAVSYQTKVNLLSAISPCCORETPEGAEALPWYEPYIYL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157
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; PRIOR APPLICATION NUMBER: U.S.07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-756-161A-1

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPAHVAVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGCPSPTHVLLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYEPYVL 120
Db 61 QVLFKGGQCPSTHVLTLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYEPYVL 120
Qy 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 13
US-09-903-327A-7
; Sequence 7, Application US/09903327A
; Patent No. US2002016433A1
; GENERAL INFORMATION:
; APPLICANT: Nemerow, Glen R.
; APPLICANT: Li, Erguang
; TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET
; TITLE OF INVENTION: GENE DELIVERY
; FILE REFERENCE: 22908-1228
; CURRENT APPLICATION NUMBER: US/09/903,327A
; CURRENT FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: 09/613,017
; PRIOR FILING DATE: 2000-07-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Human
; FEATURE:
; NAME/KEY: PEPTIDE
; LOCATION: (0)...(0)
; OTHER INFORMATION: Tumor necrosis factor-alpha (TNF alpha, mature
; OTHER INFORMATION: peptide)
US-09-903-327A-7

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Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPAHVAVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGCPSPTHVLLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYEPYVL 120
Db 61 QVLFKGGQCPSTHVLTLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYEPYVL 120
Qy 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 14
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US-09-756-398B-1
; Sequence 1, Application US/09756398B
; Publication No. US20030017584A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; TITLE OF INVENTION: Human Tumor Necrosis Factor
; FILE REFERENCE: 0975-1005-006
; CURRENT APPLICATION NUMBER: US/09/756,398B
; CURRENT FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S.07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-756-398B-1

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.1e-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPAHVAVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
Qy 61 QVLFSGQGCPSPTHVLLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYEPYVL 120
Db 61 QVLFKGGQCPSTHVLTLTHTISRIASVYQTRVNLLSAISPCCORETPEGAEALPWYEPYVL 120
Qy 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 15
US-09-897-724-1
; Sequence 1, Application US/09897724
; Publication No. US20030175837A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Chrayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott
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Tue May 9 11:18:21 2006

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; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of
; FILE REFERENCE: 0975.1005-012
; CURRENT APPLICATION NUMBER: US/09/897,724
; CURRENT FILING DATE: 2001-07-02
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; PRIOR APPLICATION NUMBER: U.S. 07/943,852
; PRIOR FILING DATE: 1992-09-11
; PRIOR APPLICATION NUMBER: U.S. 07/853,606
; PRIOR FILING DATE: 1992-03-18
; PRIOR APPLICATION NUMBER: U.S. 07/670,827
; PRIOR FILING DATE: 1991-03-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-897-724-1

Query Match          96.4%; Score 777; DB 3; Length 157;
Best Local Similarity 96.2%; Pred. No. 1.le-78;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPAHVYVNPQAEQQLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   |||||

QY 61 QVLFSCQGCPCSTHVLTLTHTISRIASVYQTRVNLLSAISPCQRETPEGAEALPWYEPYIL 120
   |||||
Db 61 QVLFKQGCPCSTHVLTLTHTISRIASVYQTKVNLLSAIKSPCQRETPEGAEALPWYEPYIL 120
   |||||

QY 121 GGVFQLETGDRLSAENRPDYLDFAESGGVYFGIALL 157
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Db 121 GGVFQLEKGRLSAENRPDYLDFAESGGVYFGIALL 157
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Job time : 46.5 secs

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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 11:26:47 ; Search time 9.75 Seconds
(without alignments)
745.303 Million cell updates/sec

Title: US-10-668-178-16

Perfect score: 806

Sequence: 1 VRSSRTSPDAPVAHVANP.....RPDYLDFAESGOVFGIALL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 235405 seqs, 46284737 residues

Total number of hits satisfying chosen parameters: 235405

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA New:*

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12: /SIDSS/ptodata/1/pubpaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	777	96.4	157	11 US-11-010-954-1	Sequence 1, Appli
2	777	96.4	157	11 US-11-053-750-1	Sequence 1, Appli
3	777	96.4	157	11 US-11-053-749-1	Sequence 1, Appli
4	777	96.4	157	11 US-11-108-001-12	Sequence 12, Appl
5	777	96.4	157	11 US-11-170-753-1	Sequence 1, Appli
6	777	96.4	157	11 US-11-179-353-1	Sequence 1, Appli
7	777	96.4	157	11 US-11-181-030-1	Sequence 1, Appli
8	777	96.4	157	11 US-11-182-033-1	Sequence 1, Appli
9	777	96.4	157	11 US-11-195-589-1	Sequence 1, Appli
10	777	96.4	158	11 US-11-082-544-4	Sequence 4, Appli
11	777	96.4	154	11 US-11-108-001-2	Sequence 2, Appli
12	777	96.4	170	8 US-10-490-953-35	Sequence 35, Appli
13	777	96.4	180	11 US-11-082-544-8	Sequence 8, Appli
14	777	96.4	233	9 US-10-523-328-1	Sequence 1, Appli
15	777	96.4	233	11 US-11-246-387-8	Sequence 8, Appli
16	768	95.3	157	9 US-10-504-389A-55	Sequence 55, Appl
17	632.5	78.5	235	11 US-11-032-797-8	Sequence 8, Appli
18	486	60.3	104	11 US-11-065-663-5	Sequence 5, Appli
19	486	60.3	104	11 US-11-249-714-5	Sequence 5, Appli
20	214.5	26.6	177	9 US-10-999-866-61	Sequence 61, Appl
21	214.5	26.6	205	9 US-10-995-561-1028	Sequence 1028, Ap

ALIGNMENTS

RESULT 1

US-11-010-954-1
; Sequence 1, Application US/11010954
; Publication No. US20050249735A1

; GENERAL INFORMATION:

; APPLICANT: Le, Junming

; APPLICANT: Vilcek, Jan

; APPLICANT: Daddona, Peter

; APPLICANT: Ghayeb, John

; APPLICANT: Knight, David

; APPLICANT: Siegel, Scott

; APPLICANT: Shealy, David

; TITLE OF INVENTION: Methods of Treating Ankylosing Spondylitis Using Anti-TNF Antibio

; FILE REFERENCE: 0975.1005-043

; CURRENT APPLICATION NUMBER: US/11/010,954

; CURRENT FILING DATE: 2004-12-13

; PRIOR APPLICATION NUMBER: US 10/637,759

; PRIOR FILING DATE: 2003-08-08

; PRIOR APPLICATION NUMBER: US 09/920,137

; PRIOR FILING DATE: 2001-08-01

; PRIOR APPLICATION NUMBER: US 09/927,703

; PRIOR FILING DATE: 2001-08-10

; PRIOR APPLICATION NUMBER: US 09/756,398

; PRIOR FILING DATE: 2001-01-08

; PRIOR APPLICATION NUMBER: US 60/236,826

; PRIOR FILING DATE: 2000-09-29

; PRIOR APPLICATION NUMBER: US 60/223,360

; PRIOR FILING DATE: 2000-08-07

; NUMBER OF SEQ ID NOS: 30

; SOFTWARE: FASTSEQ for Windows Version 4.0

; SEQ ID NO 1

; LENGTH: 157

; TYPE: PRT

; ORGANISM: Homo sapiens

US-11-010-954-1

Query Match 96.4%; Score 777; DB 11; Length 157;

Best Local Similarity 96.2%; Pred. No. 8e-76;

Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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DB 1 VRSSRTSPDKPVAHVANPQAEGQLWLNRRNALLANGVELRDNLQVVPSEGLYIYS 60


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; FILE REFERENCE: A-68990-7
; CURRENT APPLICATION NUMBER: US/11/108,001
; CURRENT FILING DATE: 2005-04-14
; PRIOR APPLICATION NUMBER: US 10/963,994
; PRIOR FILING DATE: 2004-10-12
; PRIOR APPLICATION NUMBER: US 09/798,789
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: US 09/945,150
; PRIOR FILING DATE: 2001-08-31
; PRIOR APPLICATION NUMBER: US 09/981,289
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 10/262,630
; PRIOR FILING DATE: 2002-09-30
; PRIOR APPLICATION NUMBER: US 60/553,908
; PRIOR FILING DATE: 2004-03-17
; PRIOR APPLICATION NUMBER: US 60/510,430
; PRIOR FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: US 60/509,960
; PRIOR FILING DATE: 2003-10-09
; PRIOR APPLICATION NUMBER: US 60/528,275
; PRIOR FILING DATE: 2003-12-08
; PRIOR APPLICATION NUMBER: US 60/523,647
; PRIOR FILING DATE: 2003-11-20
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 12
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-170-001-12

Query Match          96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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   |||||
Db 1 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
   |||||

QY 61 QVLFSGQGPCSTHVLTHTSIRIAVSQTRVNLSSAISPCCORETPEGAEALPWYEPYIYL 120
   |||||
Db 61 QVLFKQGGCPSTHVLTHTSIRIAVSQTRVNLSSAISPCCORETPEGAEALPWYEPYIYL 120
   |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
   |||||
Db 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157
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RESULT 5
US-11-170-753-1
; Sequence 1, Application US/11/170753
; Publication No. US20060013816A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods of Treating Psoriasis Using
; FILE REFERENCE: 0975.1005-050
; CURRENT APPLICATION NUMBER: US/11/170,753
; CURRENT FILING DATE: 2005-06-29
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
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; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-170-753-1

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Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYIYS 60
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QY 61 QVLFSGQGPCSTHVLTHTSIRIAVSQTRVNLSSAISPCCORETPEGAEALPWYEPYIYL 120
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QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
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Db 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIALL 157
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RESULT 6
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; Sequence 1, Application US/11/179359
; Publication No. US20060018905A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Wilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods for Treating Systemic Lupus Erythematosus
; FILE REFERENCE: 0975.1005-054
; CURRENT APPLICATION NUMBER: US/11/179,359
; CURRENT FILING DATE: 2005-07-12
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
; PRIOR APPLICATION NUMBER: U.S. 08/570,674
; PRIOR FILING DATE: 1995-12-11
; PRIOR APPLICATION NUMBER: U.S. 08/324,799
; PRIOR FILING DATE: 1994-10-18
; PRIOR APPLICATION NUMBER: U.S. 08/192,102
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,861
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/192,093
; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
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; PRIOR FILING DATE: 1993-02-02
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-179-359-1

Query Match          96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPVAVHVNAPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
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QY 61 QVLFSGGQCPSTHLLTHTTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWTEPIYL 120
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QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
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Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
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RESULT 7
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; Publication No. US20060018906A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; TITLE OF INVENTION: Methods for Treating Sarcoidosis Using
; FILE REFERENCE: 0975.1005-055
; CURRENT APPLICATION NUMBER: US/11/181,030
; PRIOR FILING DATE: 2005-07-13
; PRIOR APPLICATION NUMBER: U.S. 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/756,398
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; PRIOR APPLICATION NUMBER: U.S. 09/133,119
; PRIOR FILING DATE: 1998-08-12
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; PRIOR FILING DATE: 1994-02-04
; PRIOR APPLICATION NUMBER: U.S. 08/010,406
; PRIOR FILING DATE: 1993-01-29
; PRIOR APPLICATION NUMBER: U.S. 08/013,413
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; Remaining Prior Application data removed - See File Wrapper or PALM.
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; ORGANISM: Homo sapiens
US-11-181-030-1

Query Match          96.4%; Score 777; DB 11; Length 157;
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Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPVAVHVNAPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

QY 61 QVLFSGGQCPSTHLLTHTTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 61 QVLFKGQCGPSTHLLTHTTISRIAVSYQTKVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

RESULT 8
US-11-182-033-1
; Sequence 1, Application US/11182033
; Publication No. US20060018907A1
; GENERAL INFORMATION:
; APPLICANT: Le, Junming
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter
; APPLICANT: Ghayeb, John
; APPLICANT: Knight, David
; APPLICANT: Siegel, Scott
; APPLICANT: Shealy, David
; TITLE OF INVENTION: Anti-TNF Antibodies and Peptides of Human
; FILE REFERENCE: 0975.1005-044
; CURRENT APPLICATION NUMBER: US/11/182,033
; PRIOR FILING DATE: 2005-07-14
; PRIOR APPLICATION NUMBER: US 10/637,759
; PRIOR FILING DATE: 2003-08-08
; PRIOR APPLICATION NUMBER: US 09/920,137
; PRIOR FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 09/927,703
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: US 09/756,398
; PRIOR FILING DATE: 2001-01-08
; PRIOR APPLICATION NUMBER: US 60/236,826
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: US 60/223,360
; PRIOR FILING DATE: 2000-08-07
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-182-033-1

Query Match          96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRTPSDAPVAHVANPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 1 VRSSRTPSDKPVAVHVNAPQAEQQLWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

QY 61 QVLFSGGQCPSTHLLTHTTISRIAVSYQTRVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 61 QVLFKGQCGPSTHLLTHTTISRIAVSYQTKVNLLSAISPCCORETPEGAEALPWTEPIYL 120
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGQVYFGIALL 157
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

RESULT 9
US-11-195-589-1
; Sequence 1, Application US/11195589
```


Publication No. US20060024310A1
GENERAL INFORMATION:
APPLICANT: Le, Junming
APPLICANT: Vilcek, Jan
APPLICANT: Daddona, Peter
APPLICANT: Ghayeb, John
APPLICANT: Knight, David
APPLICANT: Siegel, Scott
TITLE OF INVENTION: Methods of Treating TNFa-Mediated
Tissue Injury Using Anti-TNF Antibodies and Peptides
FILE REFERENCE: 0975.1005-042
CURRENT APPLICATION NUMBER: US/11/195,589
PRIORITY FILING DATE: 2005-08-02
PRIOR APPLICATION NUMBER: US 09/927,703
PRIOR FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: US 09/756,398
PRIOR FILING DATE: 2001-01-08
PRIOR APPLICATION NUMBER: US 09/133,119
PRIOR FILING DATE: 1998-08-12
PRIOR APPLICATION NUMBER: US 08/570,674
PRIOR FILING DATE: 1995-12-11
PRIOR APPLICATION NUMBER: US 08/324,799
PRIOR FILING DATE: 1994-10-18
PRIOR APPLICATION NUMBER: US 08/192,102
PRIOR FILING DATE: 1994-02-04
PRIOR APPLICATION NUMBER: US 08/010,406
PRIOR FILING DATE: 1993-01-29
PRIOR APPLICATION NUMBER: US 08/013,413
PRIOR FILING DATE: 02-02-1993
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 1
LENGTH: 157
TYPE: PRT
ORGANISM: Homo sapiens
US-11-195-589-1

Query Match 96.4%; Score 777; DB 11; Length 157;
Best Local Similarity 96.2%; Pred. No. 8e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSPDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 1 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
QY 61 QVLFSGGCPSTHVLTHHTISRIASVQTRVNLISAIASPCQRETPEGAEALPWYEPYIL 120
DB 61 QVLFSGGCPSTHVLTHHTISRIASVQTRVNLISAIASPCQRETPEGAEALPWYEPYIL 120
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGGVYFGIALL 157
DB 121 GGVFOLEKGRLSAEINRPDYLDFAESGGVYFGIALL 157

RESULT 10
US-11-082-544-4
Sequence 4, Application US/11082544
Publication No. US20050249706A1
GENERAL INFORMATION:
APPLICANT: Bermudes, G.
APPLICANT: King, I.
APPLICANT: Clairmont, C.
APPLICANT: Lin, S.
APPLICANT: Belcourt, M.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TUMOR-TARGETED DELIVERY OF EFFECTOR MOLECULES
FILE REFERENCE: 8002-059
CURRENT APPLICATION NUMBER: US/11/082,544

CURRENT FILING DATE: 2005-03-17
PRIOR APPLICATION NUMBER: US/09/645,415
PRIOR FILING DATE: 2000-08-24
PRIOR APPLICATION NUMBER: 60/157,581
PRIOR FILING DATE: 1999-10-04
PRIOR APPLICATION NUMBER: 60/157,637
PRIOR FILING DATE: 1999-10-04
NUMBER OF SEQ ID NOS: 61
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 4
LENGTH: 158
TYPE: PRT
ORGANISM: Homo sapiens
US-11-082-544-4

Query Match 96.4%; Score 777; DB 11; Length 158;
Best Local Similarity 96.2%; Pred. No. 8.1e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;
QY 1 VRSSRTSPDAPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 60
DB 2 VRSSRTSPDKPVAHVANPQAEGLQWLNRRANALLANGVELRDNLQVVPSEGLYLIYS 61
QY 61 QVLFSGGCPSTHVLTHHTISRIASVQTRVNLISAIASPCQRETPEGAEALPWYEPYIL 120
DB 62 QVLFSGGCPSTHVLTHHTISRIASVQTRVNLISAIASPCQRETPEGAEALPWYEPYIL 121
QY 121 GGVFOLETGDRLSAEINRPDYLDFAESGGVYFGIALL 157
DB 122 GGVFOLEKGRLSAEINRPDYLDFAESGGVYFGIALL 158

RESULT 11
US-11-108-001-2
Sequence 2, Application US/11108001
Publication No. US20050265962A1
GENERAL INFORMATION:
APPLICANT: Desjarlais, John R.
APPLICANT: Steed, Paul Michael
APPLICANT: Zalevsky, Jonathan
APPLICANT: Zalevsky, David Edmund
TITLE OF INVENTION: PROTEIN BASED TNF-ALPHA VARIANTS FOR THE TREATMENT OF TNF-ALPHA
RELATED DISORDERS
FILE REFERENCE: A-68990-7
CURRENT APPLICATION NUMBER: US/11/108,001
CURRENT FILING DATE: 2005-04-14
PRIOR APPLICATION NUMBER: US 10/963,994
PRIOR FILING DATE: 2004-10-12
PRIOR APPLICATION NUMBER: US 09/798,789
PRIOR FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: US 09/945,150
PRIOR FILING DATE: 2001-08-31
PRIOR APPLICATION NUMBER: US 09/981,289
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: US 10/262,630
PRIOR FILING DATE: 2002-09-30
PRIOR APPLICATION NUMBER: US 60/553,908
PRIOR FILING DATE: 2004-03-17
PRIOR APPLICATION NUMBER: US 60/510,430
PRIOR FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/509,960
PRIOR FILING DATE: 2003-10-09
PRIOR APPLICATION NUMBER: US 60/528,275
PRIOR FILING DATE: 2003-12-08
PRIOR APPLICATION NUMBER: US 60/523,647
PRIOR FILING DATE: 2003-11-20
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn version 3.3
SEQ ID NO 2
LENGTH: 164
TYPE: PRT
ORGANISM: Homo sapiens

US-11-108-001-2

Query Match 96.4%; Score 777; DB 11; Length 164;
Best Local Similarity 96.2%; Pred. No. 8.5e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSDAPVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
Db 8 VRSSRTSDKPKVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 67
Qy 61 QVLFSGQGPCSTHVLTHLTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 120
Db 68 QVLFKGQGPCSTHVLTHLTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 127
Qy 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 128 GGVFQLEKGDRLSABEINRPDYLDFAESGQVYFGIIAL 164

RESULT 12

US-10-490-953-35
; Sequence 35, Application US/10490953
; Publication No. US20060088908A1
; GENERAL INFORMATION:
; APPLICANT: SKERRA, ARNE
; APPLICANT: SCHLEUBER, STEFFEN
; TITLE OF INVENTION: MUTAINS OF HUMAN NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN AND
; FILE OF INVENTION: RELATED PROTEINS
; FILE REFERENCE: 029029-0104
; CURRENT APPLICATION NUMBER: US/10/490,953
; CURRENT FILING DATE: 2004-03-29
; PRIOR APPLICATION NUMBER: PCT/EP02/10490
; PRIOR FILING DATE: 2002-09-18
; PRIOR APPLICATION NUMBER: PCT/EP02/04223
; PRIOR FILING DATE: 2002-04-16
; PRIOR APPLICATION NUMBER: PCT/EP01/11213
; PRIOR FILING DATE: 2001-09-27
; NUMBER OF SEQ ID NOS: 39
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 35
; LENGTH: 170
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: amino acid sequence
; FEATURE:
; NAME/KEY: CHAIN
; LOCATION: (1)..(170)
; OTHER INFORMATION: fusion protein of tumor necrosis factor alpha and
; OTHER INFORMATION: affinity tag
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (1)..(13)
; OTHER INFORMATION: Affinity tag Arg-Gly-Ser-His(6)-Gly(3)
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (14)..(170)
; OTHER INFORMATION: mature tumor necrosis factor alpha

US-10-490-953-35

Query Match 96.4%; Score 777; DB 8; Length 170;
Best Local Similarity 96.2%; Pred. No. 8.9e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSDAPVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
Db 14 VRSSRTSDKPKVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 73
Qy 61 QVLFSGQGPCSTHVLTHLTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 120
Db 74 QVLFKGQGPCSTHVLTHLTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 133

Qy 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 134 GGVFQLEKGDRLSABEINRPDYLDFAESGQVYFGIIAL 170

RESULT 13

US-11-082-544-8
; Sequence 8, Application US/11082544
; Publication No. US20050249706A1
; GENERAL INFORMATION:
; APPLICANT: Bermudes, G.
; APPLICANT: King, I.
; APPLICANT: Clairmont, C.
; APPLICANT: Lin, S.
; APPLICANT: Belcourt, M.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; FILE OF INVENTION: TUMOR-TARGETED DELIVERY OF EFFECTOR MOLECULES
; FILE REFERENCE: 8002-059
; CURRENT APPLICATION NUMBER: US/11/082,544
; CURRENT FILING DATE: 2005-03-17
; PRIOR APPLICATION NUMBER: US/09/645,415
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/157,581
; PRIOR FILING DATE: 1999-10-04
; PRIOR APPLICATION NUMBER: 60/157,637
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 61
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 8
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Fusion construct

US-11-082-544-8

Query Match 96.4%; Score 777; DB 11; Length 180;
Best Local Similarity 96.2%; Pred. No. 9.5e-76;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 VRSSRTSDAPVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 60
Db 24 VRSSRTSDKPKVAHVANPQAEQQLWLNRRNALLANGVELRDNLVVPSEGLYLIYS 83
Qy 61 QVLFSGQGPCSTHVLTHLTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 120
Db 84 QVLFKGQGPCSTHVLTHLTISRIAVSYQTRVNLLSAISPQORETPEGAEALPWYEPIYL 143
Qy 121 GGVFQLETGDRLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 144 GGVFQLEKGDRLSABEINRPDYLDFAESGQVYFGIIAL 180

RESULT 14

US-10-523-328-1
; Sequence 1, Application US/10523328
; Publication No. US20060078944A1
; GENERAL INFORMATION:
; APPLICANT: Kuali, Jun
; APPLICANT: Lin, Lih-Ling
; APPLICANT: Wooteers, Joseph L.
; APPLICANT: Nickbarg, Elliot
; TITLE OF INVENTION: METHODS AND REAGENTS RELATING TO INFLAMMATION AND APOPTOSIS
; FILE REFERENCE: WYTH-P01-001
; CURRENT APPLICATION NUMBER: US/10/523,328
; CURRENT FILING DATE: 2005-02-01
; PRIOR APPLICATION NUMBER: 60/400,410
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 233
; TYPE: PRT

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; ORGANISM: Homo sapiens
US-10-523-328-1

Query Match          96.4%; Score 777; DB 9; Length 233;
Best Local Similarity 96.2%; Pred. No. 1.3e-75;
Matches 151; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSSTPSPDAPVAHVAVVNPQAEQQLQWLNRANALLANGVELRDNLQVVPSEGLYLIYS 60
    |||||
DB 77 VRSSSTPSPDKPVAHVAVVNPQAEQQLQWLNRANALLANGVELRDNLQVVPSEGLYLIYS 136
    |||||

QY 61 QVLFSQGCGPSTHVLTLTHTISRIAVSYQTRVNLLSAIASPCQRETPEGAEALPWYEPIYL 120
    |||||
DB 137 QVLFKGCGCPSTHVLTLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEPWYEPIYL 196
    |||||

QY 121 GGVFOLETGRLSAEINRPDYLDFAESGGVYFGIIAL 157
    |||||
DB 197 GGVFQLEKGRLSAEINRPDYLDFAESGGVYFGIIAL 233
    |||||

RESULT 15
US-11-246-387-8
; Sequence 8, Application US/11246387
; Publication No. US20060078994A1
; GENERAL INFORMATION:
; APPLICANT: Argos Therapeutics, Inc.
; APPLICANT: Kirin Beer Kabushiki Kaisha
; APPLICANT: Healey, Don
; APPLICANT: Tcherepanova, Irina
; APPLICANT: Adams, Melissa
; APPLICANT: Hinohara, Atsushi
; TITLE OF INVENTION: MATURE DENDRITIC CELL COMPOSITIONS AND METHODS FOR CULTURING SAME
; FILE REFERENCE: MER030
; CURRENT APPLICATION NUMBER: US/11/246,387
; CURRENT FILING DATE: 2005-10-07
; PRIOR APPLICATION NUMBER: US 60/522,512
; PRIOR FILING DATE: 2004-10-07
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: Patentin version 3.3
; SEQ ID NO 8
; LENGTH: 233
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-246-387-8

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